

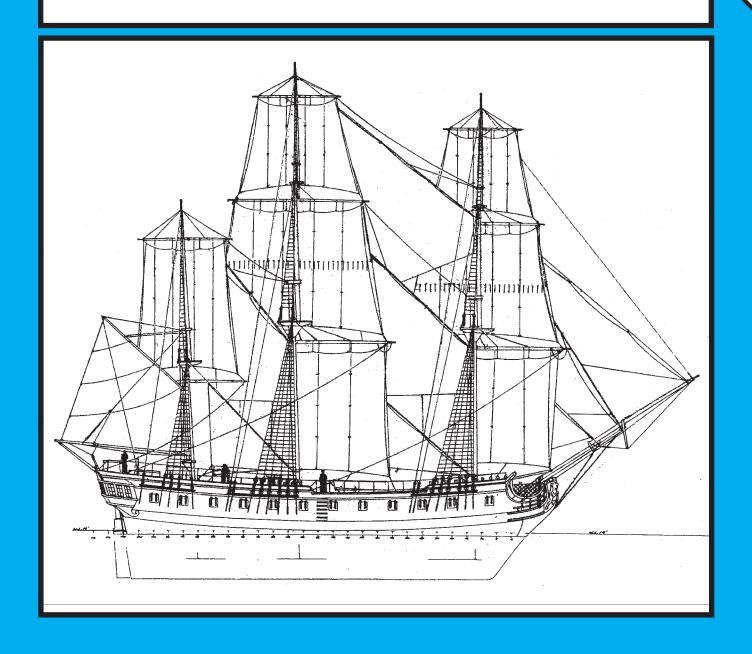
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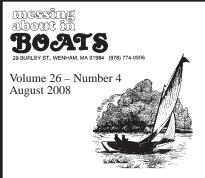
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BOATS

Volume 26- Number 4

August 2008





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# Commentary...

Bob Hicks, Editor



There's a bit of housekeeping detail about this issue I figure I ought to tell you about to dispel growing suspicions you might be harboring that my mind is succumbing to its years.

Some of you, but not all I'm given to understand by our printer, will have received July issues in which you will have noticed a lack of continuity in two places in that issue.

The first occurs with Dick Newick's "Water Wandering the Coast of Europe" beginning on page 20. Turning to page 21 you will have discovered you're suddenly transported back to our May issue story, "Snubbin' thru Jersey," for the next two pages. It would have been obvious to you that something was wrong here, probably occasioning a wondering about what I had in mind or why I wasn't paying attention when putting the issue together.

The second occurs on page 47, facing Mississippi Bob's "In my Shop" which appears to be complete on page 46 but is actually lacking a following page 47 of photos, replaced by pages 47 and then 48 from that May issue. Page 48 carries the first of two pages of "25 Years Ago in *MAIB*," a feature we have been running, but this one also from that May issue. You might have wondered why I chose to rerun that one, too. At least the lack of the intended page 48 article, "The Case for Tulip Poplar," would not have been obvious to you.

Wha hoppen? I mentioned that some, but not all, of you may have received these confusing issues. After I drew the attention of the printer to the mix-up (they were unaware of it or would obviously have fixed it) their investigation revealed that during the press run something went wrong and it had to be stopped partway through to fix the problem. At this point the press operator had to replace a plate. When so doing he somehow picked up the same plate (pages 20-21 and 47-48) from the May issue (why in the world was that still lying to hand?), stuck it onto the press, and subsequently did not notice his error. All the issues following the stoppage came out with four wrong pages lifted from the May issue.

This all was unknown to me until I received my bulk lot of leftovers at the end of May, ten days after all the subscriber issues had

been bulk mailed. When I skimmed through the issue to see how it looked I came across page 21 and my heart sank. "Not again!" was my immediate reaction, for in last year's September 15 issue a similar substitution had been made, that time two pages worth.

Nobody at the printer had picked up on these mistakes in either instance. Until I called all was blissful unawareness. And then it was too late, all the magazines were long gone in the mails.

So in this issue you will find that I have rerun the two articles affected. Those of you who got the issues printed prior to the problem now know why you are seeing these again. Those who received the issues printed after the problem can now rest assured that I have still not lost my way doing this job.

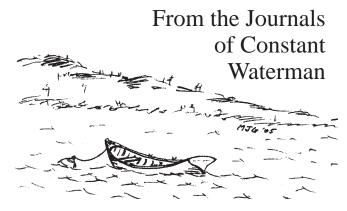
So why do I tell you all this? I figured I owed you this explanation, just as I did last fall. How the magazine gets printed and mailed should not normally be of any concern to readers, but when an issue arrives that is obviously screwed up I have to assume that at least some readers will wonder why and possibly speculate on my competence. We (Roberta and I) always see a final proof of what is going onto the press prior to the press run (an electronic thingie called a PDF that arrives via the great internet system) to catch any last minute mistakes, but only someone in the press room (350 miles from our office) is in a position to do a final final inspection of the actual printed pages you will be getting hot off the press. Didn't happen.

In the now over 12 years the magazine has been printed by our present printer there have been maybe a half dozen issues with what I consider to be major flaws and mistakes, not too bad I think in a run of over 250 issues. Mistakes do get made and all I hope to gain after the fact is an explanation of what action will be taken to preclude the same sort of mistake from happening again.

Yet every so often a new, unsuspected situation arises to again confound me and confuse you, our readers. We just cannot seem to cover all the ways things can go wrong along the way from here to you. Yes, I know, this is not really a major topic of concern to you but I do seem to still feel some obligation to do things right.

## On the Cover...

One of Phil Bolger's major design achievements was his 1969 square rigger, *Rose*, which went on to more recent fame as the *HMS Surprise* in the film *Master and Commander*. Phil tells us all about his design and its fascinating history in this issue.



By Matthew Goldman

Went sailing yesterday. First time this year and, though there have been more pleasant days, it certainly sufficed. MoonWind stood ready to go, her motor started on the third pull and ran smoothly. The mainsail remains tucked away under its cover, the battery has a charge. But Bob decided to move his Able 20, *Dreamtime*, to her summer slip two piers over and, as long as she had to go abroad, we might as well jog about the harbor and clean the growth from her bottom.

He worked on the piers yesterday and today restoring water to the docks and opened up *Dreamtime* and started up her motor. He ran out the first tank of fuel, meanwhile flushing the motor with fresh water. At 4:30, ready to depart, he connected the motor to the second gas can, primed the carburetor, and pushed the ignition. Nothing. And then more nothing. Enough nothing to run down the battery. Turns out the gas had some water in it. He purged the fuel system and off she went, fired up and purred.

Meanwhile, I had gotten the sails on her but the breeze blew directly up the channel. We motored out past the breakwater, fell off, and hoisted our rags. Had to tack a few times to clear Mouse Island as the light breeze and the tide tended to carry us back into West Cove. We cleared Mouse, finally, fell off until we ran dead before the wind, and ascended the Mystic River, wung out with the tide behind us.

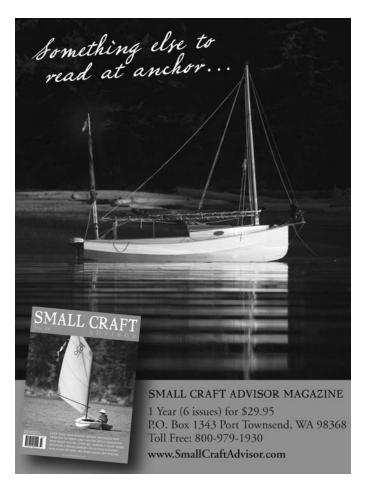
Rather overcast and maybe 50 degrees, one of those innocuous days when the whole world seems but shades of grey, drab, and of little interest. But it only seems so. Lacking contrast, form, shade, and composition take on more significance. When you learn to see with the artist's eye you discern a dozen shades in any object where light and shadow mingle. With diffused light you must learn to read a subtler sort of contrast and revel in sparseness. The sky and sea are met at the horizon, do they diverge or converge? Even when the fog has enveloped your vessel, when your sail merges with the prevalent whiteness, even then beauty surrounds you.

We never made it much past Six-Penny Island. The tide had trouble overcoming the current, the breeze abated until our jib could scarcely lift the sheets. We rippled up the river at a pace to please an artist, remarking the quiet homes and the few moored boats. And suddenly, over our shoulder, we noticed the sun reclined on the muted softness of Fishers Island. I dropped the despondent jib, we sheeted in the main, and came about. The motor started immediately, the four small pistons pushed us down the river without complaint. The mainsail tumbled upon the deck, I unbent it and stowed it below. We rounded Mouse Island and headed into our harbor, the breeze again at our backs.

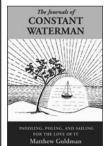
The mooring field contained but last year's stubble, not a shoot attested to the seaworthy crop to come. The 50 vessels fast at the piers seemed abandoned. The ferry, in between trips, had no one aboard. We discovered a work barge moored alongside the pier in the berth intended for Dreamtime, the yard replaces the steel hoops that attach to the pier and ride up and down the pilings. The berth astern held a boat from Fishers Island, the berth ahead had a single mooring line fast to a cleat.

Though the line seemed glossy, we chanced leaving Dreamtime there for a couple of days until the yard moved their barge. We tucked the Able into the berth ahead and plumped her pillows. Just as we finish securing, along came the owner, a 25' Parker skiff with an enclosed pilothouse. Bob moved *Dreamtime* into a slip at a finger pier across the walkway. I helped them both to secure and the three of us shared a pleasant chat on the pier before we headed our several ways to supper.

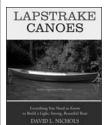
Amazingly we didn't have any adventures all afternoon. We encountered no storms with waves breaking over our mast, we never piled our boat on the rocks, we scarcely drowned enough to make it worthwhile and, worst of all, we were never rescued by mermaids. But I suppose someone needs to have such uneventful trips. Otherwise we'd never be impressed by all your yarns.



## **NEW** BOOKS FOR MESSERS



Matthew Goldman's wise, funny, beautifully written and intensely boaty stories are now available in a book, with over 50 pen-and-ink illustrations by the author. A wonderful gift! 336 pages, paperback, \$14



Detailed instructions plus an extraordinary sequence of 300 color photos make lapstrake boatbuilding accessible to beginners. Includes full plans for three canoes. 160 pages, paperback, \$21.95

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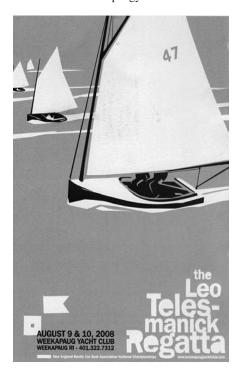
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# You write to us about...

## Activities & Events...

The Leo Telesmanick Regatta

This year's Leo Telesmanick Regatta for Beetle Cats takes place on August 9 and 10 at the Weekapaug Yacht Club in Weekapaug, Rhode Island. Interested persons may obtain more information from the club at (401) 322-7312 or www.weekapaugyachtclub.com



26th Annual Antique & Classic Boat Festival

The 26th Annual Antique & Classic Boat Festival comes to the Hawthorne Cove Marina in Salem, Massachusetts, on August 23-24, Saturday, 11am-5pm and Sunday, 11am-3pm. In these days of steep admission prices the festival still asks a donation of only \$5 with children under 12 in free.

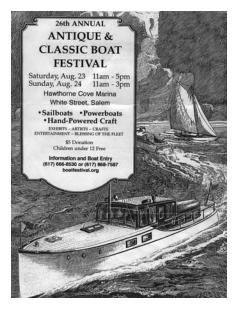
A great variety of vintage sailboats and motor yachts will be on view ranging from a 1900 courting canoe, to sleek 1920-50s mahogany runabouts and cabin cruisers, to sloops, sharpies, yawls, and schooners. A special treat is getting to board the boats. Many proud owners give the public personal tours of their boats, regaling visitors with fascinating tales of voyages, how they acquired their boat, and the joys and woes of restoring them. Although many of these craft are museum quality, they are real boats, in the water, and in use by their owners today.

The festival also features music and a crafts market including artists, print makers, ship modelers, woodcarvers, booksellers, and purveyors of other interesting wares. The Blessing of the Fleet and Parade of Boats round out this festive weekend.

The festival has brought together boat owners with persons who have known their boats in the past. Last year participant *Matchless*, a 100-year-old catboat owned by Peter Haney of Bourne, Massachusetts, was visited by a former owner who had her in the 1950s.

Teaser, a 1935 sailboat owned by Dana Marcorelle of South Hamilton, Massachusetts, was visited by Rosamond Dennis of Salem, who had loved the boat and sailed aboard her as a child. Her friend, Alice Bonney, 89, of nearby Beverly saw Teaser launched in 1935 and spent her honeymoon aboard her! Yachting historian and long-time festival judge, Llewellyn Howland III of Jamaica Plain, Massachusetts, recognized Sandrala, a 1940 42' Alden yawl owned by brothers Dan and Doug Webb of Reading, Massachusetts. He had known her as a youth in Falmouth in the 1940s.

For further information and Boat Entry call (617) 666-8530 or (617) 868-7587, www.boatfestival.org



## Adventures & Experiences...

Spreading the Word

When I go to the Mid-Atlantic Small Craft Festival I always take my back issues of *Messing About in Boats* and hand them out to the sailors. They are always eager to receive them and I feel it's a good advertisement.

Our season is just around the corner and I'm anxious to get out in my "new to me" 1981 Omega 14, *Dumpling*, with my crew, Mishka, an Italian greyhound.

Paul Lubarski, Severna Park, MD

#### **Missed Small Craft Festival**

Just a brief note on Mystic Seaport's Small Craft Weekend. I drove down to Mystic Saturday morning, June 7, having recently renewed my membership there, and much to my chagrin nothing was there. The event had been cancelled due to lack of interest in the staff to run the event as well as the decreasing turnout of boat builders. I hope the lack of staffers to run the event is only a temporary obstacle, not a permanent one.

Harry Fleming III, Woodbury, CT

**Land Dinghy** 

When we sailed across the Adriatic from Italy and down the Yugoslavian coast back in the early '70s, I found I needed a "land din-

ghy" to get to the Customs Offices, usually located on the other side of the harbor, or to go to the edge of town where the only gas station was located. I had an Atomic 4 installed in our 29-footer and needed gasoline, everyone else in Europe had diesel engines, and to try to find ice.

The Italians made a fold-up motorcycle, a Benelli City Bike, 50cc with an automatic transmission. The handlebars would release by undoing a wing nut and fold down so that they now lay on top of the gas tank. The tires on the wheels were about 12" in diameter.

The mini motorcycle was about 3' long by 1' high and 1' wide in the folded condition. I could stow it in the sail locker of our boat, easily drop it into the dinghy when I rowed ashore, and then lift it onto a wharf. Then it was unfold the City Bike, add the seat, open the air vent on the gas cap, open the gas petcock, tickle the carburetor float, give it a kick, and away I went on my errands, the true land dinghy.

In Europe these 50cc machines didn't require licensing nor driver's licenses but they were speed limited to 30km/h. When I found ours it had been sitting in a showroom for months and, with its typical two-cycle engine, the carburetor was gummed up. The mechanic removed the carburetor to clean the jets and a second one removed an aluminum elbow pipe that connected the carburetor to the engine block and put it in a drill press. He then drilled out the restrictor in the elbow pipe and when it was all reassembled and fired up the itty-bitty puddy cat turned into a snarling tiger! A speed limit of 30km/h? How about 70 km/h?

Connie Benneck, Glastonbury, CT

## Information of Interest...

**Hugh has Magazines for You** 

I'm at that advanced stage of life when it seems prudent to slim down the possessions, partly because of a move later this year to a smaller base of operations in a retirement community, and partly out of pity for our estate executor. I'm basically insecure and feel best when surrounded by piles of possessions. But some have got to go! Therefore, I offer the following magazines free to any reader of *MAIB*, provided they pick them up at my home in Manchester, Massachusetts, or arrange for shipment. If no takers by August, they get recycled:

A knee-high stack of Maine Coast Fisherman, now moldy-oldies but with loads of John Gardner articles on small boats to build and great bits of Maine nautical history. I almost cried when MCF morphed into the blander, fishing-oriented National Fisherman.

*WoodenBoat*. I seem to remember subscribing not long after issue #1 was issued.

Naval Institute Proceedings. I joined in 1943 or 1944 but these issues only go about halfway back, to about 1960.

Naval History, from issue #1.

Pacific Maritime, about eight year's worth of the Pacific Coast's best commercial nautical magazine. This is the magazine for which I started writing my monthly maritime news columns. Only MAIB readers get to read the entire columns, PacMar and the next magazine only publish space-available shortened versions. I also write articles about new tugboat technologies for PacMar.

New Zealand Professional Skipper. Maybe six years ago Skipper started using my columns. I also am its international correspondent and contribute articles from time to time. A remarkable magazine with extensive coverage of its general subject by fascinating bunch of writers, Skipper is a magazine that cannot be read in just an hour.

New Zealand Aquaculture, Issue #1, September 2004 onward. From the same firm that outputs NZ Skipper. NZ-grown green-

lipped mussels, yum!

Mariner Life and Western Mariner, maybe issues for the last eight to ten years. These are highly competitive British Columbia commercial maritime magazines that don't get into commercial fishing or yachting but otherwise cover what goes on in that fascinating region. Included will be some copies of a predecessor magazine, some bound. From time to time, I write for Mariner Life.

MAIB from pretty near the beginning. I reserve the right to keep any copy that has some of my writings in it. In the case of MAIB that could be quite few copies!

Hugh Ware, 65 Summer St, Manchester, MA 01944, (978) 526-1765, hware@nii.net

Quadraplegic's Kayak Launched

A Cal Pol alumnus working with current faculty and staff piloted the first adaptive kayak outfitted for quadriplegic use through Morro Bay on its maiden voyage May 16. Bryan Gingg (BS, Social Sciences, 1990) has been paralyzed and without the use of his arms or legs since an auto accident in 1982.

Gingg was the test pilot for a kayak for quadriplegics developed by Cal Poly Kinesiology Professor Kevin Taylor and Mechanical Engineering Professor Frank Owen, along with Cal Poly kinesiology and engineering students. The kayak is steered by an electronic sensor system run with a digital "straw." The kayak has a small electric motor. Disabled kayakers can sip or puff on the straw, sending signals to the kayak's sensor controls to operate the craft. The high-tech kayak also includes a joystick feature for paraplegic users, those with movement in their arms.

Current kinesiology student project manager Zach Thurow and a cadre of students were on hand at Morro Bay Friday, May 16, to situate Gingg in the kayak and monitor the test of the kayak and sensor system. Other students formed a flotilla of 13 safety paddlers in kayaks surrounding Gingg in the "solo quad" kayak during its journey.

The Solo Quad-Conversion Project has been underway since 2002 when professors Taylor and Owen wrote a grant application to the Christopher and Dana Reeve Paralysis Foundation. The \$11,000 grant was funded and Taylor has coordinated the project ever since, working closely with College of Engineering students and faculty as well as numerous Kinesiology students.

The Cal Poly craft will be used as part of the university's Adaptive Paddling Program, which helps people with disabilities partici-

pate in aquatic recreation.

Contact Mary McNally, Cal Poly Public Affairs for photos and more info, (805) 756-7109, mmcnally@calpoly.edu

> **Saving Lives Then** Changing Lives Now

2008 marks the Hull Lifesaving Museum's 30th Anniversary! We look forward to special events and programs commemorating this exciting landmark. A major highlight will be opening our core major exhibit, "Keeping a Weather Eye, Shipwrecks and Lifesaving in Boston Harbor.

The Hull Lifesaving Museum is much more than a museum, it is an essential part of the community, providing not only crucial lessons from our maritime heritage but life changing and life saving experiences. No longer the best kept secret in town, the Hull Lifesaving Museum is 30 years old and standing proud,

Hull Lifesaving Museum, 1117 Nantas-ket Ave, PO Box 221, Hull, MA 02045, (781) 925-5433, www.lifesavingmuseum.org

#### **Latest from Fred Shell**

Here are two photos of my latest design. I'm not sure of a name yet. Perhaps "Schooner 15½". Specs are: length 15-6", beam 5'3", weight 155lbssail area 94sf.

First sail trials have been very promising, 7.4kts in 15kt wind (by GPS), sustained speeds of 6-7kts, easy to single hand. It can be reefed by stowing the fore sail boom and rolling the sail on the mast, more or less.

Two rowing stations make it a nice all around small craft. The construction is my

standard glued ply lapstrake.

Fred Shell, Shell Boats, 561 Polly Hubbard Rd, St Albans, VT 05478, (802) 524-9645, www.shellboats.com





## Information Wanted...

**Looking for Inboard Power** 

I am a first time restorer restoring an old wooden 20' heavily built crab skiff. It has an air-cooled direct-drive motor, not running, that I would like to replace with a 15-40hp water or air-cooled motor with R-N-F, transmission, economical to operate, used but reliable, and easy to install for a novice. I am looking for a source, information, advice, any kind of help I can get. Thanks in advance. Jay Ardan, (540) 343-9890, jrardan@

Thanks to Ron for His Help

Thanks for including mention and photos of my boats on the "You write to us about..." pages in the April issue. Ron Mulloy of Randolph, New Jersey, saw the information on my C-Lark and sent a number of pages of most helpful advice on the rigging and rudder. I want to thank him for his help.

Bill Trumbull, Ft Harrison, MT

## This Magazine...

#### MAIB Ads Work

Back at the end of last season, just before the new year, I placed two ads in MAIB, one for a boat for sale and one for a boat wanted. Well, I'm now out in my new/used Adirondack Guideboat made possible by the sale of my Grumman Sport Boat. Both transactions were the result of my ads in MAIB.

Steve Rossi, East Haddam, CT

#### Until the Money is Gone

Two gentlemen friends bump into each other at the coffee shop after not seeing each other for some time.

Tom (a gardening magazine publisher) says to Bob (a small boating magazine publisher), "I hear you won the lottery, Bob. \$10 million, wow! What are you going to do with the money?'

Bob replies, "I think I'll keep putting out the magazine until the money is gone."

I enjoy each and every issue and find your new schedule just fine. It makes life here on Cobscook Bay on the Maine coast even better.

Patrick Mehr, Charlotte, ME



#### KavakCraft by Ted Moores

Learn from a master! Ted Moores has been building and teaching in the art of stripconstruction for years. book includes Steve Killing The four designed kayaks. It's

techniques, so results will be great. 185 pgs., softcover \$19.95 + \$4.50 postage The WoodenBoat Store P.O. Box 78 Brooklin, ME 04616

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## Creating a Legend

By Commander Tyrone G. Martin U.S. Navy (Retired) Tryon Publishing Company, Inc 1997 (125 pages)

Reviewed by Turner Matthews

This informative and fascinating book was written by the captain of the *USS Constitution* who was in command during her historic restoration back to sailing condition prior to this country's bicentennial.

It is, first and foremost, a scholarly work with footnotes scattered throughout, a five-page bibliography, and several appendices which include all relevant dimensions, Joshua Humphrey's materials estimate for these 44-gun frigates, as well as specifications for the cannon and rigging. The work is eloquently illustrated by John Roach, a US Navy combat artist (who, among other achievements, created the mural for the *USS Arizona* Memorial at Pearl Harbor) and Sam Manning of *WoodenBoat* fame.

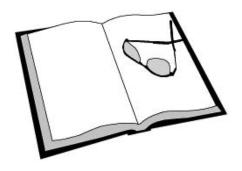
I appreciated this writing on many levels. To begin with, I am still pondering the immensity of the project undertaken by our young nation. As you may recall, our nation had no navy or significant armed ships at the time this ship and the two other frigates (*USS United States* and *USS Constellation*) were ultimately authorized and funded by Congress. It simply wasn't like the British when they would order up a couple more 74s.

All of the materials had to be gathered and shipped to the three building sites at Boston, Washington, and Baltimore. As an example of the basic logistics, how long would it take to find, cut, mill, and ship 525 live oak futtocks? Or 18,000' feet of 4" plank for the bottoms? Or 50,000 locust trunnells 18", 24", and 30" long? For me, Appendices A and B, which set forth the specifications required (example: "Lower Futtocks" of live oak, sided 12" in the midships and something smaller at the fore and after ends of the ship to butt against the side of the deadwood amidships; to have cross-chocks fayed on the deadwood, and their heels to be bolted through the keelson and keel with 11/8" bolts) are sufficient reason to purchase the book.

The explanation of the actual building process, supported by the tables of data and the evocative illustrations, provide an understandable description which should be detailed enough for the truly interested and simple enough to keep the casual reader's interest.

Underlying this building process is the historical aspect of the book. It would behoove us all to read this if only to see how our Congress and government actually functioned and were at work in making the decision to create our navy. The first chapter of the book is a concise essay of the underlying causes which created the legislation entitled "An Act to Provide A Naval Armament" which was signed by President Washington on March 27, 1794. In an era in which legislation can run to many pages for the most basic ideas, it is refreshing to read the whole of this act, which is essentially the germ of our present navy, in just two-and-a-half pages of the book.

The work progresses from the preliminary discussion of the need for a navy to protect our shipping on to the manner in which



# Book Reviews

Joshua Humphreys was chosen as the designer of the rather revolutionary 44-gun heavy frigates. Just 44 years old at the time of his formal appointment as Naval Constructor in 1794, it is implied in the book that his appointment was due more to his connections and access to the Secretary of War, as well as his residence in Philadelphia, than to any pre-eminence in his chosen field. Fortunately, even if true this use of his connections in obtaining his appointment turned out well for the country and fledgling navy as he had given serious attention to the subject on his own initiative long before the appointment was made.

His official plan for the frigates, which is reproduced in the book, consisted of but a single sheet of paper. On it were three views of the ship, a side view, or sheer plan, the half-breadth plan, which was an overhead view of one half of the ship's hull lengthwise, and thirdly, a view of the body plan, which is a split view, the port side showing the ship from astern and the starboard from ahead. In addition to this drawing he produced, of course, a table of offsets and the list of materials and specifications previously referred to. From this information shipwrights in different ports would build the frigates for our first navy. Because of the individual interpretation of the plans the Constitution, Constellation, and United States were similar in appearance but not identical.

Although these heavy frigates were, in fact, a completely new concept and class of ship not then possessed by any other country, the most innovative elements of Humphreys' design were to be found in various places in his materials and specifications and would become visibly evident only when the ship's structure took shape. As an example, when you consider that a sailing frigate typically required 1,500 or more trees to be shaped into even more pieces and then joined together into a structure of 200' feet or more, and which further was expected to carry huge amounts of weight, much of it in the extremes of the hull, you can imagine that deflection of the hull or "hogging" was a condition which was always potentially present, particularly in the highly dynamic environment of the sea.

To this problem, Humphreys brought a new concept which greatly reduced the problem and added immense strength, through the rigidity of the hull, to the whole ship. His solution, which is precisely described and illustrated in the book, was to create a system of long curving pieces called "diagonal riders" to be installed between the keel and the berth deck beams. Through this system of diagonals, Humphreys caused the downward thrust of weights at the ends of the hull to press

against one another near the ship's center of bending at the keel, largely counteracting the detrimental effects.

Although this was the major innovation, his strengthening of the hull structure contained many other new concepts. The end result was a system which resulted in the ship's having enough flexibility to work easily in a seaway while still having the inherent dynamic energy to counteract the natural tendency of a long ship to hog.

The chapter dealing with the building teams and the letting of contracts was again of particular interest to me because of its historical aspect and the fact that our government was of a size and makeup as to actually allow it to function in a direct way in helping to organize the construction. This was an evolving process and the actual funding for the completion of the initial three 44-gun frigates (the Act to Provide a Naval Armament had authorized four 44-gun and two 36-gun frigates) ebbed and flowed dependent upon both the situation in the Mediterranean with the Algerian pirates and their seizing of our commerce despite their ongoing negotiations for tribute from the European nations, as well as significant opposition in the Congress where opponents argued that the proposed naval force "was too expensive, was a menace to democratic government, was inadequate, and that its development could upset both the British and render negotiations with the Algerians more difficult." It ultimately passed the House 50-39 and was passed without division in the Senate. Section 9 of the Act, which was added to help overcome House opposition, provided that in the event a peace treaty was agreed between the United States and the Algerians, construction funding would be halted.

It was then, under this cloud of uncertainty, that the organization and construction began to take shape. The initial planning phase of the construction started right at the top with President Washington assigning construction of the frigates to Portsmouth (New Hampshire), Boston, New York, Philadelphia, Baltimore, and Gosport (Portsmouth), Virginia. Contracts for the construction were generally let with existing yards at the locations. In Boston, where the *Constitution* would be built, the yard of Edmund Hart was selected.

Secretary of War Knox then appointed four-man teams to oversee the construction at each location on an exclusive full-time basis. Lacking knowledge of other persons who might have the proper abilities to manage the projects and safeguard the government's interest, his selections were made mostly from among those who had been commissioned officers in the Revolution. Each of these key persons selected for the construction of the Constitution are discussed, along with their pay rate and specific duties.

The remaining portions of the book dealing with the actual building of the ship and its ultimate launch and fitting out set forth all of the problems faced by the construction team in building the *Constitution*. These include a great insight into the political bickering about the purpose and costs of the project, the difficulty of sourcing and shipping the essential live oak and red cedar for framing, and the inability of our industrial base to properly and expeditiously cast acceptable large caliber cannon (24 pounders) or produce copper in sufficient dimensions to clad the bottom. The sheets of copper were ultimately purchased from British mills.

To complicate matters even more, in early March 1796 a peace treaty was signed with the Regency of Algiers, thus triggering the implementation of Article Nine of the Authorizing Act, requiring the cessation of any further expenditure or work. President Washington immediately communicated with the Congress, suggesting that an immediate suspension of the work then ongoing would cause too great a loss to the public at large and on April 20 a bill was passed authorizing the President to direct the completion of the three frigates then building at Philadelphia, Boston, and Baltimore and further giving him discretionary power to complete the other three frigates "having due regard to the existing price of labor and materials."

From this inauspicious beginning then, rose the *Constitution*, the oldest continually commissioned ship afloat who has served her purpose and nation proudly for over 200 years. For all she has done for this country I think you owe it to her to read this book to better understand both what she represented and the nation we once were.

Creating a Legend is presently in an additional printing and should be available in the near future at the USS Constitution Museum, Boston MA, (617) 426-1812 Ext 135. Their website is www.ussconstitution museumstore.org. They have another of Commander Martin's books in stock, A Most Fortunate Ship, 440 pages, 1997, Naval Institute Press. This book contains much of the information contained in Creating a Legend but expands far beyond her building and launch.

WoodenBoat, Nov/Dec 1997, Number 139 has a 12-page article on her bicentennial rebuild and sail with photos by Benjamin Mendlowitz. Commander Martin is prominently mentioned in the article.

# Deadrise and Cross-Planked

By Larry S. Chowning Tidewater Publishers Centreville, MD 21617

Reviewed by Ron McIrvin

The Chesapeake Bay is a big, rich, beautiful body of water whose first settlers marveled over the large stands of virgin timber growing along the shoreline and the bountiful harvest produced within the waters of the bay. Wood and water were the main ingredients that shaped settlers lives along the Bay's shores.

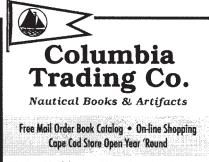
During the 1800s and early 1900s a boat was a necessity for a family living along the Chesapeake shoreline. It is the development and refinement of the boats preferred by watermen of the Chesapeake that this book is about. The Chesapeake can produce short, choppy waves and the hull shape most satisfactory for working these conditions is the V-bottom hull, or deadrise as the shape is known locally around the Bay.

Prior to the 1880s the Chesapeake had two main fisheries, oysters and fin fish. Shad and herring were seined, working from the shore, salted down, and sold domestically or shipped to the West Indies. Both fish and oysters were worked primarily with double ended log canoes which handled the Chesapeake chop well and were satisfactory for that work.

Here is a word of explanation. The log canoes were built by hewing the boat bottom, up to the chine, from one to three (sometimes more) solid logs. If more than one log was used the logs, after shaping, were pinned together. Then the topsides were planked around ribs that were attached to the bottom log or logs. These boats are descendents from the dugout log canoe.

During the late 1880s, and primarily as a result of changes in methods in the crab and oyster fishery, Bay builders took up V-bottom (deadrise) construction. From that time until the mid-1970s wooden deadrise cross-planked boats were the vessels of choice for the Bay's watermen.

This book is a history of the development of the deadrise cross-planked boats throughout those 90-some years. It discusses how the design changed and was refined to accommodate gas and diesel engines instead of sail and the demands of the fishery methods on the design. Very interesting accounts of the lives and boats built by over 20



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317-283-8321 (Bob) 812-378-4236 (John) builders were discussed. Skipjacks, Chesapeake Buyboats, Potomac River Dories, and Bateaux are covered with a description of their history, construction, and builders' stories. In addition to construction details of the various craft there are many personal stories of the people involved in the building and using of the boats on the Bay.

Mr Francis Haynie of Cod Creek, Virginia, at 78 years, may be the last builder of wooden deadrise cross-planked fishing boats who does all the work himself starting with cutting the trees in the woods for the building of his boats. His story is told in detail, it's great.

Beginning in the late 1970s fiberglass builders began constructing replacement V-bottom fishing boats for the Chesapeake Bay watermen. Likewise, in the 1980s aluminum and steel V-bottom hulls were also built. Although some success was had with the hulls of modern materials, the Bay's fishermen seem to still like their wooden boats.

The book size is 8½"x11", there are 152 pages of text, 140 black-and-white photographs, a glossary, list of Deadrise Boat builders, a bibliography, and an index. The only thing I missed was a good map of the areas referred to in the text, that would have been very helpful.

I enjoyed the book, it's written about a particular area and boat but accomplished in an interesting manner. Having the pictures woven into the stories makes the book difficult to put down.

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Saturday on the beach at Atsena Otie Key.

Cedar Key 2008 is now in the history book as one of the largest gatherings of kindred spirits in the southeastern United States. Our Squadron's participation and support of this event was evidenced by the number of dinners we sold at our Saturday evening cookout (157) and the number of Squadron members who attended (at least 53). We also made many new friends and signed up six new members at the event and three new members since! Our membership is now over 100 family memberships, and if Meade Gougeon's talk after our cookout is any indication of the future of boating, we may see a further increase in the years to come.

People are starting to realize that a 300 horsepower engine on the back of a boat is not needed to have fun on the water. Many fishermen have discovered the joy of kayak fishing and many of the new buyers of our local SeaPearls, for example, come from the ranks of former kayakers and canoe sailors.

When we found out a few weeks before Cedar Key that my brother wouldn't be able to cook for our cookout, the Squadron really showed its stuff! Members signed up to bring things to the cookout, volunteered to be chefs, brought the Steel Drum Band and PA system, and helped transport the two pickup loads of stuff necessary to our participation.

New friends that we hadn't yet met and old friends from years gone by all commented on how organized our cookout was and what a great friendly bunch we all are! Of course we know that, but it's sure nice that other people can see it in our smiling faces!

So much for the cookout! There was also a lot of sailing being done at Cedar Key! The winds on Friday afternoon were light to moderate. Ted took me out sailing in his Bolger TomCat, which is a hard chine, plywood rendition of the famous 12' Beetle Cat. Although small in overall length, Ted's cat is not a really small boat. Its 6' beam makes it a powerful

## Cedar Key Small Boat Meet

By Ron Hoddinott Reprinted from the West Coast Trailer Sailing Squadron News

sailer and we plowed through the waves with a good amount of speed, at times making Dale's Core Sound 17 work hard to overtake us!

Slightly stiffer winds were on the agenda for Saturday. Harvey and his son Tom offered me a ride aboard *Weehawken*, his Sea-Pearl Tri, and it was a great ride in the 12-15kt breeze. There were six Sea-Pearl Tris this year and Dave Bybee's Tri (one of two from Wisconsin) paced us for awhile. We also crossed tacks with Ed and Becky's new Sea-Pearl Tri *Blue Bayou*. From what I understand they blew by quite a few boats on Saturday! Paul and Dodie's *Wing-It* had six people on board and were really enjoying the rides.

After a good long sail we coasted in to the beach at Atsena Otie Key where there must have been 40-50 small boats pulled up on the beach. Hugh Horton and Meade and Jan Gougeon were there, although Meade and Jan were mostly sailing their new Weta trimarans. Those things are fast and light. With all spars and amas made of carbon fibre, they are little rocket ships for one or two people.

Dave and Mindy Boldoc were on the island aboard their newest acquisition, *Inigma*, Matt Layden's Everglades Challenge boat of a few years ago. Despite it being only 12' long Dave and Mindy somehow managed to sleep aboard with their two parrots! They also gave a most interesting talk on Saturday at our cookout! To learn more about their exploits in the Bahamas, go to Microcruising.com.

I finally got to met and greet Robb White's son, Wes, who was on the beach with a proa

of his own design. Wes sounds just like his dad and the proa is blazingly fast. He was explaining the rig to a few sailors and said it was more like the sails on a Chesapeake Log Canoe rather than a lateen rig. Sure enough, it did have a club on the clew just like the old log canoes.

So many interesting boats and so little time, but I had to get back to the hotel and start setting up for the cookout so we went ashore about 2pm. Everything went off smoothly due to the incredible amount of help that we got this year from so many members! Special thanks to David and Enid Turner who arranged to have the great children's steel drum band, "Panarama Jamma," play after the guest speakers were finished this year. The kids were wonderful. Our Squadron donated \$100 to their travel funds and folks in attendance pitched in an additional \$120 to help with their travel and camping expenses.

Sunday was wind-down day for me. Although I did stay until Monday morning, I got to sail on three different boats on Sunday! Enid and David took me out for a great sail aboard their beautiful SeaPearl *Maya*. We sailed down towards Corrigan's Reef and alongside a 37' Meadow Lark that was sailing back to Homosassa after enjoying the event. Then we headed back towards the islands and were accompanied by several groups of very friendly dolphins breaching and showing off around us.

Back on the beach I took a lunch break and then Addison took me out in Larry Mited's SeaPearl 21. We sailed all over the area and then through Atsena Otie's inner cove, which was a first for Addison! We didn't put too many scratches on her, Larry. Coming back to the Atsena Otie beach we met up with Hugh Horton and the Boldocs. Hugh let me sail *Bufflehead*, his new sailing canoe, not once but twice! First by myself to get a feel for her. She was a much more powerful sailer than his *Puffin*, which was based on a Bell Starfire hull.



Steve Woods' Bay Hen moves out!

Bufflehead has a very large cockpit and after my first run Hugh suggested that I take Mindy Boldoc out as well. I was surprised that we could both fit in the cockpit but there was plenty of room! Addison was out sailing with Dave aboard the Matt Layden-designed Inigma and we just sailed circles around her! With Mindy's weight as extra ballast (all 85lbs) the boat really felt stable although I still needed to keep my hand on the sheet!

Migma and we just sailed circles around her! With Mindy's weight as extra ballast (all 85lbs) the boat really felt stable although I still needed to keep my hand on the sheet!

If you missed Cedar Key this year put it on your calendar for 2009. Don't wait to make reservations! I put mine in as I checked out of the Island Place Hotel. Both the Island Place and the Gulfside Motel, who allow us to put on our cookout on their property, truly treated us well. We'll be back.



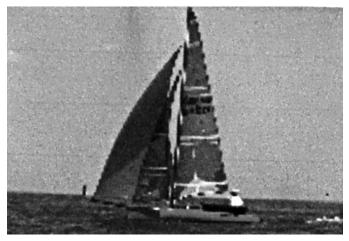
Hugh Horton sailing Bufflehead.





Ted Jean's Tomcat. Harvey's Sea Pearl tri.





Weta Tri, Meade Gougeon.



Preston Watters sailing *Ione*. Mindy Bolduc in *Inigma*.



The channel haze suspended us in a vague horizonless world as the gentle breeze in *Santa Maria's* 1,200sf of sail nudged her along from Dunkerque to Dover. The captain, engineer, sailmaker, and cook were in the wheelhouse enjoying the usual midafternoon snack while the first mate, carpenter, and deckhand sanded and painted the rail back aft. Yipper, the vessel's black cocker spaniel, had found that he could absorb the most sun by dozing atop the heavy dinghy which was lashed over the main skylight.

The sun's warmth was still a novelty to the crew, who had spent the long winter in Denmark. The month before we had a very literal shakedown our first day out of Svendborg, then the gods were kind and we couldn't have asked for finer weather to help us through the busy Kiel Canal. At Cuxhavn's salty North Sea port, bonded stores were put aboard while we closely watched the weather forecasts.

Gladly leaving the inhospitable port, we had proceeded out into the justly feared North Sea under ideal conditions. At last we had felt that the voyage was really beginning, we knew each other and the vessel and felt ready for almost anything the cruise might bring our way.

There were to be times when we would have welcomed some help when double reefing the flogging main or sweating up 40 fathoms of heavy anchor chain. The Danish skipper had retired rather young with a weak heart. A lifetime in commercial sail and motor vessels, both as captain and owner, prepared him well for world cruising in his 62' ketch. I had signed on as far as San Francisco, "if we should get so far," a prophetic remark that Asker seemed to enjoy repeating.

The Santa Maria was a girl with a past. Built as a gaff rigged yawl on the Isle of Man in 1907, her early activities are unknown, but about the time of World War I she was captured in Norwegian waters with a load of contraband. The years between the wars she spent as a motor vessel traveling the fjords in the service of a Norwegian company. After World War II she was purchased by a weekly magazine, re-rigged, and made famous in Scandanavia when she crossed the Atlantic on Columbus' original course with a popular Danish journalist aboard.

Below deck she had comfortable accommodations for six or eight in three cabins plus a practical-sized engine room. A useful, unstreamlined deckhouse sheltered the helmsman and also contained a berth and chart table. High bulwarks around the flush deck and simple, well-thought-out gear made it possible for the two of us to handle her with surprising ease.

The buoys of the mineswept coastal channel southwest from Cuxhavn had simplified navigation and kept a steady stream of shipping in highway-like lanes. I benefited

# Water Wandering the Coast of Europe



from Asker's voluminous nautical knowledge as each passing vessel brought to his mind many facts of interest. We soon fell into our seagoing watch system of four hours on and four hours off.

Three days later *Santa Maria* nosed into Scheveningen harbor, a spotless resort and fishing town adjoining the Dutch capital of Den Hague. Here I enjoyed visits with friends made the previous summer while more stores were put aboard. The unseasonable northwest wind held steady so we took advantage of its help for quick hops to Zeebrugge, Belgium, and Dunkerque, France. Several hours of rain and fog off Dunkerque had made us grateful for the extremely large and easily seen French buoys, probably the world's finest.

In Dunkerque only an occasional modern apartment or business building rose from large areas of ruins, but the shipyard at the harbor entrance had an air of cheerful activity. *La bell France!* Where else is wine so good and inexpensive? Where else do obliging customs officials so efficiently ignore foreign yachts? Where else is the individual still so important?

We would enjoy returning to the varied French coastline, but now England attracted us to its south coast, probably one of the world's finest cruising areas. Off to starboard the Goodwin Sands Light Vessel marked a dangerous graveyard so we welcomed a bit more breeze to offset a stiff tidal current and take us toward the break in the chalk cliffs where Dover Castle's ancient battlements brooded over the famous channel port.

A strange excitement accompanied my first English landfall, a hard to describe feeling that must have anticipated the warm welcomes we were to find in every English harbor. Dover started things off with a courteous official welcome plus greetings from the Royal Cinq Ports YC. The inner harbor offered calm shelter and companionship among a variety of vessels including a Colin Archer ketch, Brixham trawler, Thames barge, and a steam yacht plus assorted converted war craft

and conventional vessels. A former yachtsman befriended us and did much to make our stay even more pleasant. Yipper, too, found much of interest ashore and gave us several anxious hours while he leisurely explored the town with some English canine friends. The English are a bit stuffy about visits from unquarantined animals so we were pleased to get the dog aboard again with no official fuss.

In Dover we were joined by Asker's wife and Reg White, a friend of mine from California, neither of whom particularly enjoyed a rough channel crossing to Bolougne where we spent a good day. Looking down from the ancient city wall we observed an endless procession of festive school children, then took refuge from a shower in an ice cream shop where the jolly proprietor delighted in giving us the latest word on local politics, history, and economics. Like many Frenchmen, he was remarkably well informed. The ice cream was good, too.

In every one of the 40 harbors we visited during our cruise, Asker and I made it a habit to cover the waterfront together, observing and discussing the many interesting craft we discovered. In this way we found the Argus, a small Danish cargo motor-sailer which had departed the year before for Panama with an adventurous family aboard. Sickness, poor equipment, shipwreck, and finally lack of money had plagued them. The son told us the sad story while showing us the vessel and introducing us to some Belgian and Dutch passengers he had agreed to deliver 1,000 miles up a large South American river with a cargo of their homestead goods. It was a weird arrangement, by no means the only one we met during our travels.

Truly amazing is the number of inexperienced people who aspire to nautical adventure. Almost every port disclosed a sad story, a captured smuggler, penniless single hander, or frustrated refugee. We could have filled the *Santa Maria's* nine extra berths several times over with as strange a crew as ever trod any deck.

The channel was good to us as we returned to England and tied up at Newhaven, not a very pretty place but active. Here another friend from the United States joined us for a few days after Mrs Kure and Reg left and we cruised slowly to Shoreham, near Brighton's busy beaches, then on into the Solent to famous Cowes on the lovely Isle of Wight. I enjoyed visiting many yacht builders all along the coast and was impressed with the extremes of modern progress and old-fashioned methods I found.

In small, fast sailing craft the English are most advanced, but their power boats often seemed badly proportioned to these American eyes. Many of the ocean racing craft were very fine, as they should have been for the price! It was surprising to note that labor



and materials were valued quite equally in Denmark, Germany, Holland, and England, but the prices of the English finished product were usually 10-20% higher.

Leaving the boat at Cowes for a few days I saw a bit of the country around London, where every few steps seemed to introduce another famous setting from history or literature.

Underway again, the fabulous weather continued, providing a sparkling reach past the Needles to Poole, during which we were saucily passed by a Flying Fifteen, one of Uffa Fox's fast small boat designs.

In Shoreham, Asker had been interviewed by a reporter from a London tabloid. This character did a fabulous job of stretching and ignoring the truth, coming up with a wild story about "the captain who was sailing to the South Seas to die." It was awful but evidently provided some romance for the masses because a gentleman from the Royal Society for the Prevention of Cruelty to Animals looked us up in Poole and wanted to be certain of the dog's safety. They had gotten a couple of hundred letters from readers who were concerned that the dog might be abandoned at sea on a skipperless derelict.

An early morning start and overnight passage took us along the high rugged coast to Torquay's snug harbor. Out in the bay were three American warships on a summer cruise with many cadets aboard. The popular resort town was jammed with vacationers who enjoyed walking along the quay. We secured alongside a small Dutch freighter whose witty captain had tacked this sign to the gangway:

"Don't ask what flag this is. This is a DUTCH flag. Learn the flags of Europe!"

This underlined the fact that I, too, had been sadly ignorant on the subject of national flags when I'd arrived in Europe the previous year. Much as I deplore nationalism, it seems wise to be able to recognize the colored cloth that others might think important.

A lazy sail took us to Dartmouth, through the castle-guarded river mouth where we found the voyage's most beautiful anchorage, a fairyland snuggled in steep green hills. As with almost every port, we could have stayed longer but the sea called

and soon we were snug in Plymouth's inner harbor, just a few feet from the steps where the *Mayflower* pilgrims had embarked. Miss Greta Yeal, whom I'd met when she was an exchange teacher in California, kindly showed us Dartmoor, the surrounding countryside, and the rebuilt modern city which had risen from war's destruction.

Then we headed across the channel to the charming rocky shores of Guernsey, hidden in a thick fog which made us glad for the help of our pressure-sensitive sounding device lowered on a thin wire as we felt our way in over the bottom. Here in St Peterport we were pleased to meet another Danish yacht, the fine 40' sloop *Skjoldnaes* bound for the Mediterranean. Often in the weeks to come we were to be in adjacent berths in many different harbors with Allesch, Vilhelm, and Katie. She was a wonderful cook and hostess (typically Danish) who insisted that we on *Santa Maria* share their elegant meals.

Leaving the island of cows, tomatoes, and tourists we sailed in company to ancient walled St Afalo where we, too, found a charming cook. Else Aaare, a Danish girl who lived in Paris, changed her vacation plans and sailed for a month along the French coast with us, soon becoming an enthusiastic and able sailor. The ports of Camaret, Bele Ile, and St Nazaire were visited as warm favorable winds continued to aid us on our journey southward.

At Ile d'Yeu the voyage almost ended sadly. We secured *Santa Maria* alongside the



Else and Asker during a lazy day near Camaret.

sea wall in the small harbor in order to check her rudder and scrub her bottom after the 10' tide left her high and dry. Due to a freak accident we were neither high nor dry. The poor old girl fell away from the wall and crashed her bilge in a very solid harbor bottom in 3' of water. Fortunately no one was hurt and the rig miraculously survived the terrific jolt. But the hull was another story. Water poured in, soaking everything in the port lockers. With plenty of sympathetic help, including the local volunteer fire department with a big pump, we righted her on the next tide.

Inspection showed four heavy double oak frames broken but the pitch pine planking remained surprisingly intact. During the next two hectic weeks Asker and I removed half the vessel's copper plating, giving a local caulker access to seams and butts which were the worst offenders. Finally, with many forebodings, we were ready for a trial run which turned out to be an uncomplicated one-day sail to LaRochelle. To be sure, she leaked more than usual but the skipper thought she'd be safe enough for coastwise travel. So instead of heading for San Francisco, we decided to take her to the Mediterranean where Asker would winter and I would look for another boat heading for the States.

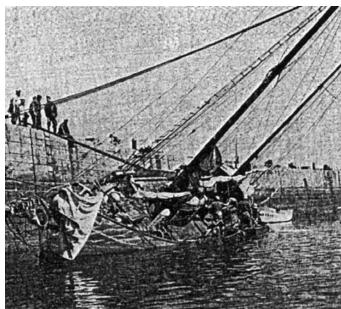
Sailing out between the medieval towers of LaRochelle Harbor, we waved a sad adieu to Else who had so cheerfully shared our good and bad fortunes.

Even the Bay of Biscay behaved herself and five days later we dropped the hook off Vigo, Spain, in a mountain-ringed bay that rivals San Francisco's. Here we again met the French catamaran *Tohu Bohu* which we had first seen in Carnaret. She was a steel 30-footer bound around the world with two likable young Frenchmen.

Vigo is poor and sunny Spain was a police state, but we enjoyed our short stay and were well treated by the proud Spaniards. Never had we seen such crowded fishing craft, 30-footers with ten crew members were not unusual. And the phosphorescence in the bay. Every moving thing on or in the water was surrounded by pearly fire at night.

Heading down the coast to Cascais and Lisbon we had a variety of weather including





Single handed fisherman at Ile d'Yeu.



two days of absolutely flat calm, a few hours of dense fog, and a couple of days of mountainous seas which were fortunately without the wind that had made them.

Portugal was a pleasant surprise. Conditions were much the same as in Spain and the only people we met who took life very seriously were the passport police and customs agents. Cascais, just inside the entrance to the broad Tagus River, is a popular resort where sleek racing craft tangle moorings with a colorful fishing fleet. The open air fish auction on the beach contrasts strangely with nearby gleaming villas. Lisbon harbor was interesting to us because of the large fleet of sailing cargo lighters which accomplished a lot of work despite strong tides and unpredictable winds. While there we also saw several of the stately schooners return from a season of fishing on the Grand Banks. In and around Lisbon many fishing boats were being built with a bare minimum of equipment. Graceful craft emerged under the skilled hands of people with a great maritime tradition. Timbers and planks were hand ripped from 2' diameter pine logs in surprisingly quick time.

As in France and Spain, we noticed many slightly obsolete craft rotting on the beach. They had often been sound when abandoned, causing us to wonder why new vessels were being built instead of using those available. One boatyard disclosed a shapely oak double ender that had obviously started her seagoing in the Danish islands. Inquiries showed that a dark night and a sand bar had combined to end an unlucky sailing career at the entrance to the Tagus River.

Off to the south we spent a quiet day at Cadiz where much American war material was being unloaded at the docks.

Heading for Tangier past Trafalgar's unimposing point and across the busy Strait of Gibraltar, we were blown back by a Force 7 Levanter with a nasty steep sea. We didn't care to strain the vessel when it was so easy to duck back into Cadiz. Next day we were similarly caught, but had progressed further so decided to keep going through a long rough night. At dawn we were punching to windward under a reefed staysail and double reefed main when Asker started the reliable Perkins diesel. The faithful old girl used only a few gallons an hour, weathering her test nicely, but we were glad to round up into the shelter of Tangier's new breakwater and spend a week in that fabulous international

smuggling center. "Business" had been poor due to greatly increased Spanish and Italian jail sentences for those caught, but many a fast gray motor vessel seemed to be held in hopeful readiness.

We had been looking forward to a visit at Gibraltar for many weeks so were pleased when a lull in the persistent Levanter gave us a lazy day of sailing through the impressive straits to the rock. Here we were beset with almost every kind of official mix-up but a couple of days of paperwork got the officials semi straightened out. By that time we were quite ready to leave. Even the kindness of Commander Woodhouse, the Queen's harbor master, could not disguise the fact that the English Navy did not encourage or welcome visiting yachts. The same could be said for a social club that goes under the name of Royal Gibraltar Yacht Club.

The nicest thing that happened to us in Gibraltar was meeting George Boston, a single hander just over from Swampscott, Massachusetts, aboard his Tahiti ketch *Fiddler's Green* which he had done a fine job of building himself. He was bound around the world and we admired his able start.

Glad to leave the rock's depressing military atmosphere, we headed into the Mediterranean where we met a fleet of Russian fishing vessels and mother ships headed into the Atlantic. During my night watches I was happy to let *Santa Maria* steer herself while I stood in awe at the bow, watching cavorting porpoises far below in the crystal phosphorescence. Their antics always amuse me but that night I stood entranced as their pearly trails wove below and exploded on the surface.

Malaga's large port contained more sailing cargo vessels than we had seen previously on the cruise. Fourteen schooners were counted busily loading and discharging grapes, wine, farm produce, bars of lead, and general cargo. They were fine looking vessels but mostly with diesels replacing topmasts.

Here we met Sigrid and Ditter, two young Germans who expressed a great interest in our voyage and soon found themselves invited along. We welcomed their company on the night watches and their help in the galley and on deck. A one-day inland bus ride from Motril took us to Grenada's fabulous Alhambra, a gem of a Moorish castle high in the mountains. Sigrid's comprehensive knowledge of the history of art made the trip

doubly worthwhile as she elaborated on the background of what we saw. Ditter had to return home from Almeria's sun-baked port but we were to enjoy Sigrid's pleasant company until the end of the passage.

The southern Spanish ports were all much the same along a dry rugged coast, ill suited for much except some mining, fishing, and a few almond and olive trees. The people were always friendly and usually poor. The harbors had seen the ships of many conquerors come and go, including Phoenician, Greek, Roman, Carthaginian, and Moorish.

Before heading for the Balearic Islands we called at Cartagena, then at Alicante where we met two fine English yachts. The *Thanet*, a sloop about 70' overall, belonged to Mr Somerset, a well-known yachtsman whom we were happy to meet. *Speedwell* was a 25' Virtue type which had been sailed from Hong Kong to England by her previous owner. Now John and Laural Goodwin were returning from the Balearic Islands in her and he was planning a solo Atlantic crossing.

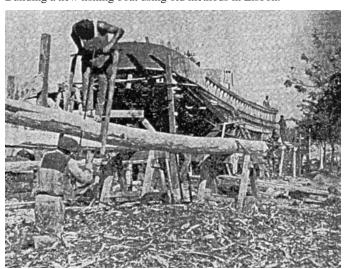
The fickle Mediterranean winds slowly glided us to Ibiza's island harbor under a high white town, a place to be remembered forever with a full moon frosting the harbor and ancient ramparts, shining an occasional light in the still, narrow streets. Here was real tranquility, a dream haven. One of the residents was Tom Crighton, an ex-San Franciscan whose book, *Sailboat Tramp*, had helped to start my wanderings. His husky Colin Archer ketch named *Jack London* was quite a change from the 25' sloop he had sailed from Sweden to Israel some years before.

Leaving Ibiza's charms we set the course toward nearby Palma de Mallorca, the last harbor to shelter us on our five-month cruise from Denmark. The Club Nautico of this modern city is a fine collection of facilities and pleasure craft. Here was one of the few places we visited where the *Santa Maria* was not conspicuously large. Among a fine international fleet the American flag graced the sterns of the *Zaca*, *Ticonderoga*, and *Fiddler's Green*.

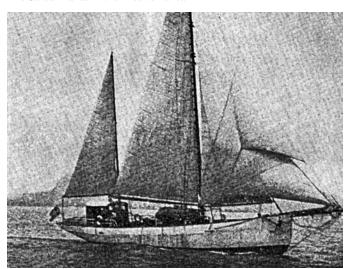
Almost too soon I found a berth on the *Adara*, a 40' Spanish built sloop headed across the Atlantic. It was not easy to say goodbye to *Santa Maria* and her crew. We had had a fine cruise even though we had not reached San Francisco.

(To Be Continued)

Building a new fishing boat using old methods in Lisbon.



The Santa Maria in the Mediterranean.



We bought the Evinrude outboard motor a year after we restored and launched the clinker-built Amesbury skiff, the *Happy*. The motor came along with an open fiberglass runabout on a trailer. The boat was heavy and it leaked. It must have been waterlogged. Within a year we got rid of the runabout but we kept the motor and used it on the big Amesbury skiff with its three thwarts and two rowing stations. It was heavy, too, but it didn't leak thanks to our collective caulking/pounding and painting efforts the year before.

Our first efforts with the Evinrude didn't go well. The first time I took it out I was stopped by the Harbor Patrol within five minutes. Dad hadn't bothered to register the *Happy* with the Massachusetts Registry of Motor Vehicles. The boat's unregistered status was made obvious by the absence of registration numbers on the bow. The Harbor Master escorted me back to my grandfather's dock and instructed me in no uncertain terms not to use it until we got it registered. My father apologized for his oversight but he couldn't get to the Registry until a week or so. The wait was frustrating!

Eventually we made it legal but our pleasure was still far from complete. The outboard motor was an 18-horse so it should have made that boat fly. I had seen kids waterskiing behind 18-horse motors on Boston Whalers, although the usual choice was a 25 or 30-horse. Somehow, though, our Evinrude couldn't even get us to plane. It moved us in a steep foamy tilt through the harbor at about eight knots tops. My father decided the boat must have been heavier than he thought and that water soaking in had swelled the weight up a few hundred pounds. So we gave up hopes of waterskiing or zooming across the harbor in a couple of minutes to picnic on Bassett's Island.

Mr Ichibe Soups Her Up

One day my friend Nick Riley and I were tooling around in Red Brook Harbor on the motorized *Happy* when we saw two people we recognized from Squeteague Harbor, two harbors south, in a motorboat. Nat Ichibe and his son were buzzing around faster than we were in a dingy with an eight-horse. Mr Ichibe asked me if we were going as fast as our boat could go. I guess he thought two boys would be unlikely to be going so slowly by choice. He asked if he could take a look under the motor's cowling and tinker with the "rich-lean" settings. I said sure, and in a minute Mr. Ichibe had finished. "Let's see how she runs now," he said.

The transformation was miraculous. In five seconds she had us riding on a smooth plane with a distant rooster tail. We went back to thank him profusely and set out around the harbor like bandits on the run. I couldn't wait to show my father and sister.

My grandfather had outfitted his first boat, the *Impulse I*, with water skis, towing rig, and flotation belts. He seldom used them and couldn't easily stow them on his boat. So with his and my father's blessing we took the ski equipment out and installed a couple of cleats on the *Happy*'s transom. With my father at the helm of our newly souped-up motor and Jill watching me, sitting up front for ballast, I had a go of it on skis. I had been up once or twice at camp on Lake Winnepesaukee behind a big old Chris Craft hot-rod runabout. But when I got up behind our own boat with my father and sister watching, I felt proud to be the first in my family to enter the

## **Cape Cod Harbors**

## Happy Waterskiing

By Rob Gogan

water skiing fraternity in Red Brook Harbor.

The older boys in the house next door were all skiers. Jill and I had watched with envy as they took out their Boston Whaler. They never asked us out, though. Their group was affiliated with the Buzzards Sailing Club on Wing's Neck where they raced Herreshoffs and Bullseyes. We were members of the Cataumet Club with activities centered in and around Squeteague Harbor where we sailed Beetle Cats. Now that we had our own ski boat we could say the heck with them.

My sister, and even my father, were eventually able to get up after a few tries. I enjoyed watching them fall a couple of times. It was thrilling to take the helm when my father took his turn. I felt like a responsible skipper by avoiding the rocks just below the surface known only to those familiar with the harbor. We went out enough times that we had to scoot over to Kingman Marina for another 5gal tankful. I remember deliberately spilling a few drops onto the water with my sister just to see the iridescence on the flatened water surface. I wouldn't do this today after reading that one drop of gasoline makes one gallon of water unfit for marine life.

#### **Uncle Red Tries Waterskiing**

When my Uncle Red came from Michigan to visit with our family, we showed them our water ski boat. Jill and I demonstrated the art. Uncle Red decided to try it out but our little 18-horse, souped-up as it was, just didn't have the pep to pull my uncle's mass out of the water. At least a dozen times my Dad at the helm would slowly advance un-

til the towline was tight, then gun the throttle wide open. The motor would roar, the bow would reach for the sky, and a mighty, frothy wake would surge behind the transom. At the end of the towline my uncle would hang on bravely with ski tips up, churning up a massive wake of his own as he inched skyward. For a second it looked as though he'd make it up as the boat seemed to speed up and flatten out a little as the drag decreased. Inevitably though, Uncle Red's skis would spread apart or wobble too much for him to remain standing and he'd fall and let go.

After my skiing was done I went up onto the lawn with the women and a crowd of my young cousins watching from there. Uncle Red's 8mm movie camera was there and now, with air-dried hands, I picked it up and started filming Uncle Red's efforts to get up. At first I hoped this would be the time he'd make it and the historic feat would be recorded for posterity. Soon it was plain to me that he'd never get up so I stopped filming the whole process of the boat's passing behind him so he could grab the tow bar, slowly tightening the line, gunning the throttle, and watching for the long seconds it took for him to drag through the water and not get up.

Mischievously I started filming only the last seconds before Uncle Red fell on several consecutive efforts. I hoped the effect would be comical and not tragic, like the ancient films of failed early airplane designs in *Those Magnificent Men in their Flying Machines*. I was sorry Uncle Red didn't get up because it might make him feel embarrassed about being overweight. Even worse, he might think our motor was underpowered. He graciously blamed his girth for the failures later, not our boat.

After the weekend with Uncle Red's family the *Happy* started leaking. The cause was plain to see, the transom was separating from the gunwales. In one place the crack was almost a quarter of an inch wide. The spot was at the same height above the water as the ski towline cleats. I guess all those efforts to get Uncle Red out of the water had been too much for the skiff. So for the rest of that summer we had to do a lot of bailing.



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No. 5

Sat. 7th. Left at the usual hour, made 3 portages; they together measured 5-1/4 miles of bad road; and 17 miles of lake way. This brought us to a small lake communicating with the river falling into Lake Aylmer. Encamped at 8pm; men tired. At the last portage but one we saw a clump of small spruce about 16 inches in height. A few grouse were shot. Nets set. These lakes abound in fine salmon trout.

Sund. 8th. Left our encampment 5-1/2am. The canoes are well arranged. Took up the net which yielded only 2 trout. Got into the river at 6am and reached the mouth at 7-1/2am. Ran 2 good rapids. Except at the mouth of the river we found L. Aylmer fast, along shore however and the bays afforded a passage. After paddling about 30 miles we found our passage barred. Broke a piece alongshore but at last the ice began to drive on shore in large fields and we were compelled to encamp at a short distance (a mile or two) from the portage of Sussex Lake.

This is most provoking, the whole of the Lake to the North and Eastward is full of unbroken ice; all hands were on it chopping away, though the weather is very warm. In a shallow bay in this lake we surprised a whole shoal of splendid salmon trout, three or four were captured by the men with their hands. The Carriboo tracks appear to be fresher than those hitherto seen. The rocks in this part of the lake are chiefly sandstone fit for the finest grindstones, and some granite.

Mond. 9th. This day has been employed chopping and pushing ice aside until we rounded a deep bay and reached a point about 3 miles in a direct line from our encampment, of last night. We are again stopped by ice and a similar day's work is before us. Wind as usual h. and cold; it froze hard last night and began to freeze at 9-1/2pm when we encamped. One of our canoes narrowly escaped destruction by being nipped between two fields of ice, they actually met. but by shoving poles under her the ice went under her bottom; all the canoes slightly damaged notwithstanding all our care. A Canada goose shot today. One of the Indians injured his foot by letting a bag of Pem'n tumble on it, our sick man still unable to work. Ther. 39 air; 34 water.

Tuesd. 10th. Wind NNE and piercing cold. The ice all froze in a solid mass and to give it time to soften we left only at 10am. The whole day was spent in breaking through ice and making portages, of the latter 4 were made, say 1-1/2 miles. We are obliged to round all the bays; some of them were very deep. I really think we have not made ten miles of direct distance. We are now in a bay, the N. and N.E. portion of which is formed of sandhills and is, I trust, the Sandhill Bay of Back. We have still much ice to break through before reaching the bottom. The men, notwithstanding their working among ice and water, are in famous spirits and many a joke and laugh is raised at the expense of those who run a risk of breaking through weak portions of the ice, in general it is about 2-1/2' to 3' thick and sound except close along shore. Encamped at 10-1/2 pm. Unable to set the nets.

## Chief Factor James Anderson's Back River Journal of 1855 Part 3

Reprinted from The Canadian Field Naturalist, May 1940

Wed. 11th. Wind mod. and variable; cloudy with occasional showers. Left our encampment at 11am having waited to allow the ice to soften a little. Just before starting a crack appeared at the next point. across to the other shore; along the side we were on was choked by ice, and though the risk was great I was determined on attempting it; fortunately the wind was very light, and after a sharp paddle we got safe through. We then had 4 hours of uninterrupted paddling, when ice again barred the road. Another crack appeared in the ice which we immediately entered and re-crossed to the opposite side. We were as nearly crushed as possible, 2 canoes only succeeded in crossing, the third had to retreat and take a passage across higher up.

We then with the exception of a decharge reached the bottom of what we considered Sand Hill Bay of Back. All our guides were ignorant of this particular portion, having come either from the River falling into this Lake or from Clinton Golden Lake overland. On surmounting a high sand hill we immediately recognized Sussex Lake from Sir G. Back's admirable drawing. The river running from it is nearly dry and we are now cutting across to an elbow of the river by a chain of these ponds and portages; the first one is made of rocks and granites with occasional sand hill!s, some of the rocks nearly white with plates of talc. In some of the bays yesterday sandstones appeared. I never saw a region so destitute of animal life, since leaving Slave Lake we have seen a white wolf and a marmot, some divers, perhaps 20 Canada geese, as many gulls. a few plover, some bands of grouse and a few small birds. One Indian has lamed himself and our sick man is still hors de combat; fortunately, notwithstanding the dreadfully severe labor they have undergone, the others are well and full of spirits.

Th. 12th. The day commenced by making 3 portages and traversing 3 small tarns which brought us to the River which is at present nearly dry, the distance from this Lake (Aylmer) is about 2 miles of portage and one of lake. We then crossed it and made another portage of 1 mile to a small lake, after crossing which we made two more portages, the river being still almost dry, of 1/4 and 1 mile. We then encamped at 9pm; men very tired and several lame. Mr. Stewart and I went on ahead to view our road and determine on the best places for portages. Two are before us. one short and the other long. Saw 2 white wolves and had a long shot at one

of them, a grey wavy was killed today. Our Indians are still ignorant of the route: we are guiding ourselves by Back's Journal, his description of the route is so minute and correct that it is needless for me to say anything. The wind was strong from the North and very cold. No mosquitoes this night, they were in clouds this morning.

Frids. 13th. the men were so fatigued that I gave them an extra hour's sleep. We made 2 portages, one of 1/4 mile, the other 1-1/4 miles over the angular debris of rocks; 4 men were so lame as to be unable to carry. We then proceeded across the little Lake and Musk Ox Lake, Back's descriptions are excellent. I think he underestimated the distance between the Portage and Musk Ox Lake. Jay River was last. The Island particularized by Back in the lake is no longer conical, the middle is sunk and the N.W. and S.E. ends raised like a saddle: the white rocks (are of gneiss) very little decomposed, the middle is in a complete state of disintegration: the rock first splits into squares of ice, then the angles are decomposed by the atmosphere and they assume the appearance of boulders and eventually are entirely decomposed forming round spots of gravelly earth a little higher than the moss which surrounds. The rocks may be seen everywhere in these regions in all stages of decomposition.

At the head of Musk Ox Rapid we found it few copper Indians. We purchased some meat from them and encamped a considerable distance down the Rapids, the entire landings were run, except at one place where a decharge was made. From this encampment the sick man and 4 Indians will return. The former and one of the Indians proceed to join Mr. Lochart: the others will join their relatives at Clinton Golden Straits. The expedition will now consist of 14 men, Mr. Stewart and myself. This will leave only 4 men for one canoe and 5 for the 2 others, 3 of whom are lame: these crews are quite insufficient; I shall therefore leave one of the canoes either tomorrow or the day after. The weather was cloudy with slight showers of rain. We find enough of dry willows to cook with: in Lake Aylmer we had nothing but heath. Saw a grouse today with its brood, it attacked me bravely. A wolf was also seen as well as a crow and a few teal which have long been strangers to us. On arriving opposite the Indian Lodges we found the carcasses of at least 20 deer rotting along the Beach: it shows the improvidence of these people.

Expedition
James Anderson, Commanding
J. G. Stewart, 2nd Commanding
Baptiste Assaminton
Joseph Anarin, Iroquois-Bows
Janice Montours
Thomas Mustigon, Mushkegon Steer'n
Paulet Papanaknis
John Fidler, Half Breed Steer'n
Henry Fidler
Edward Kippling, Half Breed Mid'n
Don'd McLeod

Geo. Daniel Jeremiah Johnson, Mushkegon Mid'n Joseph Bouche, Canad'n do Murdock McLennan, Highland do W. Reid, Orkney do

Sat. 14. Blowing a N.E. gale accompanied by rain and fog, which prevented us from leaving the encampment till 10-1/2am. We were obliged to carry most of the ladings for the remainder of the Rapids say half-way (2 miles) but the canals and agrets were run with difficulty and rather damaged, particularly one of the Resolution ones, the bark of which is most wretched. Sent back the men I mentioned with the 4 Indians. The ladings were carried at the Rapid where Back nearly lost his boat. but the canoes were merely lifted over a ledge of rock and were now safely with all the agrets. We encamped close to the spot, a little below it, where Capt'n Back repaired his boat and which he left on the 8th at 10am. Two of our present weak crews are so lame that they cannot carry. Encamped at 8-1/2pm. 2 nets were set as fish appear to be numerous. 2 Musk Oxen were seen at the Rapid of that name.

Sund. 15. Left at 4am. The nets produced nothing, though the fish were visibly numerous: this is attributed to the extreme clearness of the water. Ran 10 Rapids with full ladings, except at 2 rapids where Mr. Stewart and myself, 3 men per canoe and 6 pieces were put ashore. Encamped at 9-1/4pm at the foot of Malley's Rapid some distance below Capt. Back's encampment of July 9th. I do not find the Rapids nearly so bad as I was led to expect by Capt. Back's narrative, the water is certainly lower than it was when he passed, which renders them in this part of the river worse. Saw some Canada geese.

A cache of 1 bag Pemmican was made exactly where Back made his first cache. Wind still Ny; squally with showers of rain. A little before encamping saw a reindeer but could not pull ashore as we were just entering a rapid. When making this portage a big Musk bull was discovered and I had the luck to knock him over; the men are now cutting him up. Query the quality of the meat. We shall sup on a goose shot by Mr. Stewart. The worst canoe was left at the cache. We are now rather deep but get on well with 7 men per canoe. Some frozen snow was seen lining the shore of a rapid. 5 deer are now running about on the other side of the river: one is a fawn. Slate rocks on the beach at out encampment and 2 or 3 small alders which we have not seen for some time.

Mond. 16th. Our canoes required so much repairing that we could not leave till 10-3/4am. All the rapids mentioned by Back were run without difficulty. The water must have been higher and the Rapids stronger when he passed. Saw 4 deer and Fidler shot one; saw two bands of Musk Oxen, one of 5, the other of 20 animals, besides 5 or 6 solitary bulls. but only one shot was fired at them; 11 gray waveys were also run down. Back's description of the country is in general very correct but I did not perceive several branches of the river before arriving at L. Beechy, at the entrance or head of which we encamped at 9pm. Wind dead ahead and strong all day: weather cloudy and chilly. The rocks at our encampinent composed of slate.

Tuesd. 17. Left our encampment at 2-3/4am and passed Lake Beechy with a fine breeze aft. A complete portage was made at the Cascades; all the Rapids below it were safely run with full cargoes with the excep-

tion of one where the canoes were lightened of a few pieces and 3 men each. The current carried us on very swiftly and we encamped at 9-1/4pm at the "Sand Cliffs" passed by Back on the afternoon of the 16th instant. His description of the scenery is most correct, it is beautiful indeed. The mosses which are in full flower, and in patches on the cliffs, with their green leaves and purple flowers on the cream coloured sand, look most beautiful. Back saw immense numbers of reindeer and Musk Oxen in this part of the River; we saw but 10 of the former and about 40 of the latter, 28 of these were in one drove; they were of all sizes, the calves look like black pigs. Killed 4 Canada geese and 18 wavies, which are now moulting, they gave all hands a severe run to catch them. I saw a doe and her fawn cross a narrow part of L. Beechy, 2 wolves were waiting for them; the poor creature was in a sad dilemma, afraid to return on account of us and to land for the wolves, we shouted and drove the wolves off and I trust the poor animals escaped their fangs. Observed a great change in the temperature since leaving Lake Beechy, it is much warmer; Cap. Back observed the same thing und accounted for it by the distance from Bathhurst Inlet being increased. Made a cache of a bale of dried meat at our encampment of last night, and of one bag Pemmican at the head of the Cascades of Beechy's Lake. (Case contains 7lb. Tobacco, 3lb. Powder, 6lb. Tea, 1lb. Chocolate, some ball, soap and sundries)

Wed. 18th. Left our encampment at 4-3/4am. The canoes were lightened at the 2nd cascade and portages made at the 1st Cascade and the "dalles" previous to arriving at Baillie's R.; that stream is now only a few yards in width, tho when the water is high it is evidently an imposing stream. Encamped at 9pm about halfway between Baillie's and Warrens River. 24 Canada geese were killed, they are all males, no young ones are to be seen. A few Musk Oxen and deer were seen. The weather was clear and warm. I searched minutely for the Esquimaux marks mentioned by Back but saw none, either on the banks of the River or on the gneiss mountains mentioned by Back. Along the bank of the River small stones were often found placed one on the top of the other, but this is evidently done by the washing away of the sand from the stones. Two of Dr. Rae's men say that they do not resemble Esq. marks. I saw nothing of the old encampments. 3 kinds of gulls were seen. Cache of a bag of pemmican and a case at Ist cascade.

Thurs. 19th. Raining and blowing a gale from NE which prevented us from leaving till 6-3/4am. About 1 pm it began to rain and did not cease till we encamped at 6-1/2pm at the head of the Hawk Rapids. Just before we encamped it rained so heavily and blew so hard that the Bowsman could not distinguish the leads. Saw 20 Musk Oxen, we did not go after them, as we have plenty of fresh provisions having killed 31 large male Canada geese; at one run of 10 or 15 minutes hundreds of these birds were seen. The so-called Esq. marks are seen on the edge of every sandy or gravelly hill, but no where else; they point or run in every direction according as the River runs. Blue Lupins are found here in great perfection, and several other flowers, among others the dandelion. Warren and Jervoin rivers were dry.

Frid. 20th. The night turned out fine but cold and the morning was a lovely one. The rapids were run safely; at this stage of the water though strong they are not dangerous. Just

before reaching McKinley's River we saw fresh Esq. caches of deer along the water's edge and crows were seen. Shortly after their tents were seen, 6 men. one of them blind, came down, but they attempted nothing hostile. From signs they made they came down McKinley's R. and most probably belong to the Chesterfield Inlet tribe. Their boats were made of deerskins and Musk Ox soles, and their canoes of deer parchment. paddles of spruce, spear heads of iron; one of their women had bracelets of round common beads, and the oldest man brought down some wolf and white fox skins to trade, which we could not take at present. I gave them all presents of files, knives, needles, etc. and the women a mirror, small scissors, gartering and needles.

After leaving them we came on two other lodges and three men came to visit us, and further on two more which we did not visit as it was blowing too fresh. The men were short and stout, the women not bad looking, with clean faces tatooed the same as the females in Capt. Back's book. I regretted much not having the interpreters with us, so as to learn the route they take from Chesterfield Inlet (assuming they came from there). 2 of Dr. Rae's men with me understand and speak a few words. Shortly after leaving the 2nd Esquimaux lodges a gale came on, which shortly after increased to a storm, which nearly swamped us; this was accompanied by showers of hail and clouds of sand which nearly blinded us. At last I gave up the contest and encamped near Bullen's River at 6pm. It was piercingly cold, capots, cloaks and blankets in general demand. Both yesterday and today we were much incommoded by sand and banks (Battues); the Esquimaux also made us lose some time; they had evidently not heard of Franklin's party as we made them understand that white men who had come in ships had died from starvation at the mouth of the river. About 50 or 60 deer were seen today, but neither Musk Oxen nor geese; at the Esquimaux encampments many deer were lying at the water's edge till they get high enough for their taste, they were all does. Several fawns were lying close to the encampments apparently unalarmed. Several deer were also seen.

Sat. 21. Detained all day by wind and rain. (Entered narrows).

Sun. 22nd. The gale of yesterday abated a little this morning, but the weather was still miserable when we left our encampment at 2-1/2am. When we reached Pelly's Lake we hoisted sail and carried it most part of the day. Encamped at the 2nd narrows in Lake Garry (Back's Enc't. of 20th) at 9pm. Saw 2 Lodges of Esquimaux at the Rapids between L. Pelly and Garry but the inhabitants ran away on perceiving us; they evidently have intercourse with the Churchill Esquimaux as there were 2 tin kettles in the Lodges as well as our dogs. I left a few articles in each tent and left. A number of young fawns were running about the lodges, I suppose their dams have been killed. 2 bags of pemmican were cached at our enc't of last night. Very few deer seen; 30 geese were killed.

Course in L. Garry (To 2d Detroit E by S, mark a small island with gravel etc. shoved up by ice and crowned by square block stone in Situ but in a state of disintegration. Then through a labyrinth of islands and narrow bays to a prominent sand hill, thence to 3d Detroit NE nearby mark a clump of sand hills or cut very picturesquely, thence to Rapid (point) N by E, mark a high conical sandhill).

(To be contined)

The United States census of 1880, doubtless through an inexplicable oversight on the part of the Commissioner, ignored canoeists; but he was excusable, perhaps, since in 1870 there was not an organized canoe club within reach of his canvassers. Judging, however, from the promise now in 1883, the next report will, if members and worth be taken into the account, be obliged to schedule the knights of the paddle in a table by themselves. Surely, if 25 manufacturers of wallpaper deserve recognition, five or six thousand canoeists, representing many million dollars' worth of muscle, good fellowship, and hearty out-of-door life, are entitled to like consideration.

After the New York Club was organized in 1871 there was a long period when the most hopeful among us, while well satisfied to sail 'til the crack of doom in comparative solitude, were fain to think that canoeing was destined to fail of popular favor. In 1880 sanguine persons spoke of a "boom" when 50 canoeists met at Lake George, some with and some without canoes. In '81 there were more. In '82 the writer hereof counted 70, all under canvas at one and the same time and this did not include those that were afloat under a spruce breeze. At Stony Lake last year there were near 500 persons in camp altogether, some of them bringing their families with them and all glorying in the actual presence of some 350 canoes under full canvas, most of them flying the red and white burgee of the A.C.A. (American Canoe Association).

Reviewing the past 12 months from the threshold of another season, a marked change is manifest and there is no more delicate test than the columns of publications devoted to outdoor sports. One may count a score of advertisements where, three years ago, there were only two or three. Almost every boat builder of skill and enterprise now calls especial attention to his canoes or to his peculiar facilities for providing equipment in the way of sails, centreboards, paddles, tents, or steering gear. The official organ of the Canoe Association has passed safely into its third volume, a feat hitherto unknown in this branch of journalism, for its predecessors, published in the fatherland of modern canoeing, enjoyed, or endured, but a short and precarious existence. Almost every sporting publication that has a place worth keeping in the public estimation has now a regular canoeing editor and a department devoted to the interests of the guild.

A few years ago there were barely half a dozen clubs in the country. Now the fullest available list enumerates 31 and is confessedly incomplete. The American Canoe Association reports, through its busy Secretary, Dr. C.A. Neide, of Schuylersville, New York, an active membership of 568 and this mention of his name and address will, no doubt, bring to his already overcrowded post office box some scores of letters asking for information.

Looking northward across the Canada line we find canoeists with a genealogical record. As a recreation, canoeing dates back with the Kanucks indefinitely and there are those who claim that Jacques Cartier and Champlain were gentlemen canoeists, aside from their professional engagements as soldiers and missionaries. To them the mushroom growth of "Yankee" canoeing looks a trifle presumptuous and one could not blame them if they should feel a trifle piqued because the sport on this side of the ocean has received its present impulse from American zeal and enterprise. Nevertheless, they have

# Canoes And Canoeists A Retrospective Outlook

By Charles L Norton Reprinted from *Paddlers Past* The Journal of the Historic Canoe & Kayak Association (GB)

nobly met us more than halfway, have sent delegations to the Lake George meets, and taught us last year, at Stony Lake, a great many things that we did not know before.

I may mention here that when a boy, in 1855 or thereabouts, I saw on a St Lawrence steamer a small lapstrake boat which today might easily pass for a modification of a shadow canoe. Does any one know anything of her or of her sister craft? Let her owner announce himself and take issue of precedence with Rob Roy Macgregor.

It is worthwhile to note the modifications which have been wrought by international association. While the Canadians at first despised the double paddle as a means of propelling a canoe, it fairly won its way, at least to respectful recognition, while the Canadian models and methods of construction are largely modifying the ideas of American builders. A few years ago, for instance, nearly all our boats had floors which were either perfectly straight fore and aft or only slightly rockered. Now one can hardly find a modern boat which is not decidedly curved along the line of garboard-streaks, whether she has a keel or not. Again, the Canadians have hitherto persisted in building open canoes but now photographs are shown of graceful smooth skinned craft with full decks, water-tight compartments, hatches, sliding bulkheads, and all the rest.

American builders must look to their laurels now that Peterboro is turning out boats that meet the requirements of yachtsmen as well as of hunters and lumbermen. They may well study principle of construction which are the result of many years of patient experiment and of tests which have proved the work under every condition of rough service. The American builder, who takes a leaf from the book of his Kanuck brother in this matter of construction, will reap a golden harvest for the import duties are at present practically prohibitory.

In sailing we may perhaps fairly claim to have taught our neighbors more than they have taught us, though we believe we have to thank them, after Lord Ross, its inventor, for the introduction of the lateen sail which is probably the greatest favorite today for cruising while the lug, in its various modifications, carries off the palm for racing. (This is in full recognition of the fact that a lateen, with a jib to the fore, won the sailing prize at Stony Lake.)

The lug has become popular almost to the exclusion of all others for this purpose. The ease with which it is reefed when properly provided with lateen and running gear commends it for general use on salt water, while its shape, when set, seems to guarantee the most effective degree of effort possible for a given area of canvas. The best opinion among canoeists at present favors the conclusion that a lug will send a boat through the water faster, under all ordinary conditions, than will any other form of sail as yet devised.

The one indisputable advantage of the lateen over the lug is the shortness of its

masts which can be left standing habitually when under paddle, and the ease with which sail, spars, and all can be wholly detached from the mast and stowed below or used when in camp for a temporary awning. When, as on an ordinary cruise, there is a frequent necessity of changing from paddle to sail and vice versa, the labor of stepping and unstepping masts may easily become troublesome and every one who has tried it knows how vexatious it is to paddle with a tall mast on end to catch the wind and render the boat unresponsive to the paddle stroke. The beauty and grace of a well-made lateen are also to be considered while its sailing power is by no means despicable, even when compared with the generally victorious lug.

Each of these popular favorites has, in short, enough advantages of its own to assure it of a permanent host of adherents, at least until that indisputably perfect rig is invented which shall leave no room for a choice in any reasonable person's mind.

The year saw a somewhat marked movement in the direction of tandem, or double canoes, capable of carrying two persons comfortably and at the same time available for one. The length of such a canoe is about 16 feet, about two feet longer, that is, than the ordinary single canoe. The beam is about 31 inches. The advocates of these boats claim that, while they are far more roomy than singles, they are nearly as easy to paddle single-handed and have the great advantage of rendering companionship possible when desired.

There are certain dangers to be considered in this relation since it renders the solitary canoeist far more accessible to the wiles of designing young women than he would otherwise be. Given a canoe capable of carrying two persons comfortably, no human foresight can guard against the occasional presence of woman as the extra person. Of course, there is no objection to this in the abstract but the influence of women is largely adverse to canoeing, and as such should be held strictly in abeyance unless evidences of the true canoeing spirit are apparent.

The introduction of the tandem canoe is also looked upon with suspicion as a move in the direction of the admission of cruisers of a larger class to the association. It is certain that the canoe is the natural training school of the yachtsman, and when a canoeist becomes the owner of a seagoing craft he always goes through a period of uncertainty as to his club relations. It seems hard that he should be compelled to give up all his former associations when they are so essentially identical with the spirit of his new venture There are many canoeists who believe that the Canoe Association would be strengthened by retaining the allegiance of men who have become enamored of larger craft.

Perhaps the greatest recent improvement, in the matter of fittings, is seen in centre-boards and steering gear. In the former, several varieties of folding boards have been thoroughly tested and found practically serviceable. In the latter, a number of devices have been introduced, one of which, known as the "spring gear," the invention, we believe, of the captain of *The Raven*, A.C.A., seems to give perfect satisfaction where it has been tried.

The photographic camera has become so common an adjunct of the canoeist's outfit that this paper would be incomplete without some mention of its virtues. Within the year two or three great improvements have been made in developers, gelatine dryplates, and cameras so that the space occupied by the necessary traps is largely reduced and the possibility of keeping an absolutely truthful pictorial record of the trip is within the reach of any one who can bring himself to spend from \$25 upwards for an outfit. Of course, the instantaneous process vastly widens the possibilities of making an enjoyable record of canoe life and every season brings out improvements in this direction. Properly equipped, the canoeist can lay down his paddle or steer with his feet, if under sail, and, sighting with his patent auxiliary lens, take any desired object or group on the "fly" without so much as stopping to cover his head with the uncomfortable black cloth which has heretofore been one of the trials of the photographer.

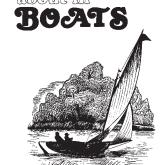
New York canoeists have this winter centralized their interests and kept up the camaraderie of warmer weather by a tri-weekly series of "camp-fires," the last two or three of which have been held in the pleasant rooms of the Kit-Kat Club, an association of artists having its headquarters at No 23 West Fourteenth street. Here members of the New York and Knickerbocker clubs have met and almost always there have been accessions from transient visitors or from unattached canoeists of the vicinity. Subjects have been given out for discussion and generally some member has prepared himself to occupy a half-hour in order to spin the ball. Little formality is observed, the main thing being to keep up a tolerably steady round of talk, question, and answer on the subject under consideration. The subject for the meeting of January 29, for instance, was "Amateur Photography" and Mr Seavey, the artist, gave some interesting explanations of methods and exhibited some beautiful new cameras. The subject for February 19 was "Tents and Camp Equipage."

We believe that some other clubs keep up winter meetings and the practice is certainly a good one. So far as we have heard, moreover, none of these gatherings have degenerated to the grade of carousals as is so apt to be the case with social meetings of young men under conditions which free them from all restraint.

Editor Comments: Readers interested in learning more about the Historic Canoe & Kayak Association and their journal should contact: Tony Ford, Am Kurpark 4, 37444 St Andreasberg, Germany; Tel: +49-5582 619; email: tford@web.de

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The Tuckup was built at the Workshop on the Water, a program and facility that I started in 1979 at the Philadelphia Maritime Museum aboard a 110'x40' steel lighter barge called Maple. A lighter barge is like a big floating warehouse and it made a great shop except that we couldn't use a level. We bought the barge for scrap value from Independent Pier and Lighterage, a tugboat outfit that had been working on the Delaware since 1970 and had literally raised her off the bottom of the river. After power washing and pumping a foot of Delaware River mud out of her hull, we wove galvanized chicken wire and re-bar through her angle iron floor beams and then poured in 8" of concrete to seal off the places in her bottom plating that had rusted through since she was built in 1947.

How about that for a volunteer project? Raising a 300-ton sunken barge isn't a job for the faint of heart and I couldn't believe that we did it. 'I say "we" because then, as now, I worked with some really great folks who volunteered to help. That crew really put up with some hard and lean times because we worked hand to mouth most of the time. Money was scarce and supplies and materials to build the shop and set up the program often came when volunteers were able to "find" something we needed somewhere along the commercial waterfront. It's always been amazing to me how resourceful a crew can be when they believe in what they're doing.

It's even more amazing how much work can be done and how much knowledge is out there to bring to bear on a worthy project when everyone gets involved in solving problems. Of course, Philadelphia was one of the most important yacht and ship building and service ports on the East Coast so there was lots of talent and stuff laying around that was "not being used by anyone else" when we needed it.

In any case, *Maple* swam on the bottom for well over 18 years and served us well as an all around boat building shop and classroom floating in a waterfront park called Penn's Landing in the heart of downtown Philadelphia. She has been scrapped over the last few years, I've heard, but I guess we all end up in the scrap yard eventually.

The Tuckup that Tom Shephard and the Delaware River TSCA sail was one of three that we built at the Workshop, in 1986 I believe. Barry Thomas, working with Ben Fuller at Mystic Seaport, built another four. By

## Musing on Tuckups

By Roger Allen Reprinted from the *Mainsheet* Newsletter of the Delaware River Chapter of the Traditional Small Craft Association

the time of the project I was doing much of the administrative and fundraising stuff to keep things going and we hired a boat builder by the name of John Brady to handle the fun stuff. I taught boat building occasionally, did the exhibits, and raised money but I don't think I did much more on the Tuckups than a single plank, a couple of hundred rivets, and a steam-bent coaming. It's always been like that, by the way. I build the programs so that I can build the boats but then find out that for the boats to continue being built I have to do the work of keeping the wolves from the door while someone else comes in to have the fun of building the boats.

John later built melonseeds with the help of John Tohanczyn, a friend of ours who now runs the Spirit of Massachusetts, the Harvey Gamage, and one other big schooner out of Maine. Both are giants in this business. Brady left to go out on his own for a while but came back to the Museum a few years after I left and has kept that shop going. John Brady is one of the best boat builders in the country and a very talented designer as well. John Tohanczyn is one of the most knowledgeable folks in the business when it comes to big boat care and feeding. Tow, as he is generally called, is one of those folks one wants in the lifeboat when the world goes to "Harry in a handbasket." He is one of the very few folks in the whole boat building world that I'd hand a belt sander to (and for those of you who have known me for any length of time, that is true high praise). All of us who are citizens of the Coast meet eventually and I'm sure you'll bump into John or Tow one of these days. You will be glad you did.

The Tuckup is a fourth class "Hiker" and it reportedly originated as a crabbing skiff common to coastal bays in the general vicinity of Point Pleasant, New Jersey (some distance north of Parkertown and Tuckerton where the melonseed first appeared, for those who care about such things). There were four classes of Hikers that raced on the Delaware

River from just after the Civil War (locally known as the War of Northern Aggression) until the turn of the century. The classes were all 15' cat-rigged sailboats and the class distinctions were broken down according to beam, sail area, and crew size.

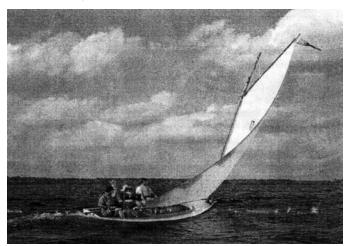
The largest Hikers had unlimited sail area with beams that reflected the extremes of the rig. They were easily distinguished from the other classes because the boats required iron spreaders that crossed the deck and extended outward from the rail as much as 3' on each side. Mast heights commonly reached in excess of 20 feet and without crew the boats would roll over. The boats were called Hikers because ballast was usually crew weight and not actual ballast in sandbags. This was supposedly done because the Delaware River is relatively narrow, and in a race upwind with a lot of short tacks it wasn't possible to shift bags often enough to be practical. Thus the crew was required to hike way out to keep the boats upright.

Tuckups were the smallest of the classes and their name was derived from the shape of the stern which tucked up into a very pretty shape with a difficult twist of the planking. Stealer planks were occasionally required to achieve the desired tuck which is a very interesting bit of work when planking a lapstreak boat. Tuckups were partially decked, lightly built of white cedar planking with steam-bent oak or locust frames, limited to a cat-rigged sail with an area of (I believe) 144sf and a maximum beam of (something?) and could have no deck spreaders. They carried a captain, sheet tender, topping lift tender, and bailer as crew.

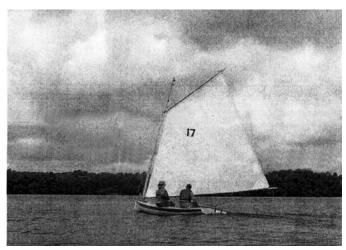
Tuckups had to carry the same number of crew throughout the race, something that was not true for the rest of the classes. If the wind looked like it was going to be heavy they might start out with eight crew members in the larger Hiker classes (mind you, this is in a 15' LOA boat hull)! If it shifted to lighter air they might drop crew over the side during the course of a race. There were lots of what were called "Fishtown tricks" like that in use during the races. Fishtown is one of the waterfront communities within the city limits of Philadelphia.

The Tuckup crew did hike out and generally the boats were equipped with ropes with toggle handles that hooked into fittings bolted through the plank keel. The bailer was the only crew person who generally didn't

TSCA members successfully holding onto an inch of freeboard in the Marion Brewington.



Mike Wick and Tom Shephard enjoying a moderate breeze on Union Lake.



hike out and you can figure out why yourself. The topping lift tender was necessary because the boom is so long in a Tuckup that it could hit the water easily and slow the boat or even bring about a capsize.

Tuckup and Hiker regattas were big events on the Delaware, large excursion steamers were regularly chartered to carry hundreds of people each as spectators. There are newspaper reports that list upwards of several hundred boats for the various classes, including Duckers, on a good weekend in the heyday of small boat racing from 1880 to 1890. The shores of the river were almost always lined with spectators as well. There is a famous painting by Thomas Eakins that depicts a race day on the Delaware, and we once tried to count all the boats in it but stopped at over a hundred. The painting is spot-on accurate for detail because Eakins was a keen sailor and boatman and the painting is a self-portrait of his own victory in a Hiker.

Philadelphia had an egalitarian yachting scene. The boats were raced out of relatively small two-story boathouses that might contain two Hikers, two Tuckups, three or four Delaware Duckers, and a few sailing canoes. Downstairs was boat storage, upstairs was the clubhouse and lockers. The boat clubs might have house painters, lawyers, carpenters, and bankers as members. Unlike elitist

organizations in New York and New England where professional sailors were hired to crew yachts during races, boat crews were usually club members in Philadelphia. Boat clubs were arranged in rows down either side of large commercial wharves and piers in specific areas of the Philadelphia and Camden waterfronts, including Bridesburg, Southwark, and Pea Shore.

Betting was one of the big attractions for the races and competition was reported to be fierce. Boat bottoms were regularly polished and then rubbed with graphite to make them slick. The boats were brightly painted and very fancy according to records that survive. Chromed fittings and pink, green, and other pastel colored hulls were not uncommon.

The whole culture fairly quickly died out because of increases in port activity, the rising value of waterfront land, and pollution in the river. The bicycle, baseball, and problems with gambling also contributed to the decline. The boats were sailed hard and lightly built. There are only three original Tuckups left in the world: *Thomas M. Seeds* at the Mariners' Museum in Newport News; *Spider* at the Independence Seaport Museum in Philadelphia; and a Tuckup hull that was built as a rowboat, also at ISM. There is a period set of plans for a fourth boat, the *Priscilla*, I be-

lieve, that was published in *Forest & Stream* magazine back in the 1890s.

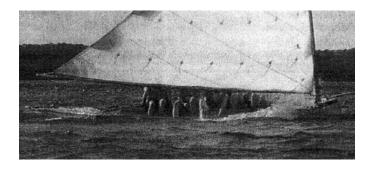
There are replicas that were built in Philadelphia and Mystic and by our wonderful friends John and Vera England in Urbanna, Virginia. Most of the modern boats were built with several complete rigs as the boats were used for racing and pleasure sailing. The all-out racing rig is a scary thing if you are as afraid of the water as I am. It is a big gaff rig! The smaller pleasure rigs have been built as gaff, sprit, and sliding gunther rigs. The smaller sail makes for a very mannerly sailing boat that can still get out of its own way.

Full and complete plans are available for the boats from the Independence Seaport Museum and John Brady would be a useful resource for anyone who wanted to build a replica. There is a lot of unique gear and rigging details in the plans for the boats, too.

Why sail one now? Because unless you have you're not a real man! Unless you have you're not a Boatman or a Waterman or a complete sailorman. Unless you have sailed a Tuckup you're a lubber and you should keep your eyes downcast when speaking in the company of real sailormen who have. Couldn't be any better reason than that except that when a Tuckup is cooking along with that big racing rig it is a most exhilarating sailing thing to do with friends.

## Tom Shepard Shares His Own Thoughts on Sailing a Tuckup...

Once went for a sail
On a Tuckup in a gale
Twas the *Brewington* vs the *Seeds*A race of lost breeds
For those who like to bail!





I had optimistic thoughts of getting favorable winds and making an early finish in this year's Mug Race on May 30. My daughter Margaret had come to Florida from Sheboygan, Wisconsin, to help with the shuttle and be my land crew. On Friday before the race we planned to visit our friend and fellow canoe sailor, Noble Enge, who had sailed the Mug Race many times in his canoe and other boats but is now recovering from a stroke in a nursing home. Dianne of the Rudder Club gave us an '08 tee shirt for Noble, which pleased him.

Margaret and I drove down Route 13 on the east side of the St Johns River to Palatka, checking for ramps in case of need for pulling out of the 40-mile race on Saturday. In Palatka, at the motel, we unloaded my canoe, Sugar, an 18' cedar strip canoe I had built many years ago. We rolled her on rollers over the grass to the launching spot and set up my

## Mug Race Report

By Bob Halsey

five-meter class sail rig (an ACA class main 44sf and an 11sf jib), not really a racing rig but handy for my usual barrier island sailing.

Saturday morning at 6:45 I launched *Sugar* and paddled and sailed to make the 7:30am start on time. There was a little breeze but not enough for a 40-mile trip by 8:30pm. We always hope a favorable wind will fill in. We did get nice breeze for maybe an hour but then it died off. As I kept trying make time with little wind, I got very tired and discouraged. I passed the place I had pulled out last year, Racy Point. I knew the Riverdale Park and ramp were somewhere not too far ahead.

I saw a couple sitting on the end of their long dock. I sailed in and asked how far to Riverdale. They said, "a little over a mile."

By the time I got turned around I was so discouraged and exhausted I just sailed back over to their dock and collapsed. The man, Mike MacNamara, came and helped me take down the sails and mast and helped me up onto the dock. I gave him Margaret's cell phone number and she answered, she was at the Riverdale Ramp. She came to Mike's. They took me into their house and gave me water and food. Meanwhile, the neighbors took my boat under the dock to a small ramp and loaded it on our trailer. I called the Rudder Club and reported that I was out of the race and OK. I was really exhausted and glad for all the generous help. I'll have to admit I am only good for about five hours of single handed canoe sailing with discouraging winds at age 91.

The wooden ship looms large again in our ocean-going fleet. At least it will in steadily growing proportions, thanks to the revival of this long neglected industry. Scores of yards here are bustling today in a common endeavor to turn out timber craft fast enough to neutralize and even to outstrip the grim work of the ravaging submarine. These plants are building actively both for the Emergency Fleet Corporation and for our Allies. The questions are: How are these yards able to maintain their race with the ubiquitous U-boat? What are these establishments doing that make quantity output possible and a speed of production practicable that, heretofore, has been undreamed of?

The story is one of Yankee resourcefulness, native ingenuity, plus an inspiriting measure of adaptability. We are going to make good the timber ship program and, what is still more significant, wooden craft will come into their own again and figure for years hence in the widening reach of our deep sea trade. But without looking to the future there is enough to thrill us in the work in hand and its rapidly maturing fruit. The average layman may not know it but we are actually facing a constructional revolution, the fabrication of wooden vessels within amazingly brief periods. This is all the more astonishing when it is recalled that the era of the wooden ship had come nearly to its close when war was declared in 1914. True, a few yards of modest capacity existed here and there but they played only a small part in the sum total of the ship building business in its broad aspect.

It is a matter of pretty general knowledge that wooden ship building in the past has been a rather leisurely moving industry and this deliberation has, in a measure, been the natural result of the agencies employed. Handwork has figured predominantly in this department of maritime life and this has followed, as a seeming matter of course, all on account of the basic raw material out of which the finished craft evolved. Beginning at the very foundation the growing timber, the saw, and the axe have fairly typified the toilsome processes involved in transforming the forest giants into fabrications capable of forging their way through battering seas and despite the sweep of angry winds.

The shipwright is a worker who has no equivalent in other trades. His tools are relatively few but these are susceptible of the nic-

## The Race Against Time in Wooden Ship-Building

By Robert G. Skerrett Reprinted from *The Rudder*, May 1918

est sort of handling. With his adze and broad ax he is able to model all sorts of shapes from great rough and heavy timbers to form the multiple parts that enter into the skeleton and body substance of a wooden vessel. With these two tools peculiar to his calling he cuts to a chalk mark or hews to a line that would prove real obstacles to the ordinary carpenter. With these simple implements the stricken giant of the forest is wrought into a beautiful tapering mast or other spar and surfaced so to a smoothness that well warrants wonderment. Dubbing a bit off here and a bit off there the man with the adze trues the curve of each frame section or brings about a union between associate parts that are so necessary to the united strength of the structure as a whole.

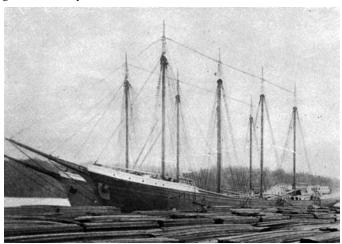
And with the hull assembled and the decks laid, then comes the task of sealing the seams between the outside planking and those of the decks. Patiently, oakum must be laid in every one of these seams and packed tight, "horsed" as they call it in the trade, by beetle and iron until every erstwhile opening is sealed securely against the intrusive sea or the outpourings of the skies. The hard-packed oakum is finished off with a topping of pitch or "payed' with some other suitable watertight composition. From the very moment when the vessel is laid down in the mould loft until she is ready for launching the shipwright plays a conspicuous part in her production and so do the caulker, the shipfitter, and the loftsman. None of these has a truly corresponding fellow craftsman in steel construction or other building trades.

With the decline of the construction of timber craft the number of these specialists dwindled notably, and when work in this field of naval architecture was revived here a year or so ago the primary problem was to obtain the needful skilled labor. The Emergency Fleet Corporation has really done wonders in the way of providing a solution of this difficulty.

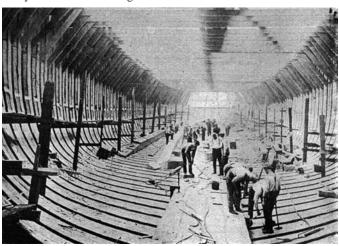
True, the Corporation could not make specialists offhand but it did the next best thing, it showed the wooden ship builder just where he could turn to kindred trades to obtain trained men who could be quickly adapted to meeting the more pressing of his needs. That is to say, shipwrights could be recruited from house carpenters, bridge carpenters, dock builders, cabinetmakers, carvers, etc, and caulkers from those previously employed along similar lines on small boats and launches. The work is essentially identical but, of course, somewhat heavier in the case of large vessels. The sparmaker could not be substituted, however, but we shall see presently that mechanical aids have been called into being which substantially make the need of this man of secondary importance. In fact, machine tools of one sort or another have either come into being anew or those already extant have been modified so as to lessen to a great extent the need of that manual cunning which has been so much the stock in trade of the regular shipwright and his brother specialists.

The sawmill of the up-to-date wooden shipyard figures at the very start more importantly than its former counterpart. That is to say the work of the mill is no longer limited to roughing out heavy planking and squaring up timbers preliminary to leaving the rest of the work to the shipwright and the sparmaker. Today, thanks to the ship band saw, it is practicable to cut out frame sections and other shapes in quantity and to give them whatever bevel may be necessary. This machine tool has been developed since the outbreak of hostilities and its practical value is best evidenced by its widespread adoption, particularly so in the yards that have been created of late for wooden construction. It is authoritatively declared that this saw does its work so accurately that substantially no dubbing by hand is subsequently needed to true up the surfaces. Manifestly the output measures far beyond that obtained in any given time where the adze and the broad ax are employed. All that is necessary is the possession of a set of suitable templates which can be prepared by model makers, the ordinary carpenter, etc. However, should dubbing be needful after the frames, knees, planking, etc are in place, there is now on the market and in growing service a portable mechanical dubber which outstrips hand tools by a wide margin in time-saving, less labor, and lower ultimate cost

Two splendid examples of the big wooden schooners being turned out in fast time by the Peninsula Shipbuilding Company, Portland, Oregon. Present day facilities enabled the builders to do this work.



Through ports left open low in the bows of a ship this up-to-date building draws into the craft with a minimum of effort ponderous keelsons, heavy strakes and other big timbers.



The mechanical dubber would probably fill its particular niche in shipyard equipment without any drawback whatever if it were not for the fact that the preservative methods now insisted upon are quite unlike those that have heretofore prevailed in the interior protection of timber craft. Common salt is no longer deemed suitable as a preventive agency against decay. Instead, the practice is now to use creosote or some of the recognized carbolineums. The coal-tar preparations no doubt can be relied upon to destroy hurtful fungi and to protect joints, splicings, and bolt holes. But these preparations tend to impart a gummy nature to the wood and this condition leads to rather speedy clogging of the blades of the dubber. This difficulty is not an insurmountable one and a bath of gasolene can be counted upon to clean the tool promptly.

In the matter of shaping and finishing surfaces a machine known as the beveling side-head has been perfected within the past year which does work that is somewhat akin to the beveling band saw already described. The operative feature of this tool is a rotary cutter or planer which can be canted to the desired angle to give the required bevel and it produces surfaces that are perfectly smooth. It must be evident how helpful an apparatus of this character is proving now when speed as well as finished workmanship are demanded.

With the frames and other shapes sawed to form and properly surfaced, the next step is to bore the holes by which they can be bolted together or held in their designed places. Formerly the ship carpenter bored these holes laboriously and slowly by means of his hand-driven augers. With hundreds of thousands of these holes in every good-sized vessel this involved tedious and protracted work. Just contrast this with the performances now made possible by portable power tools, some operated electrically while others, in fact the majority of them, are functioned by compressed air. Take, for instance, such a machine as the "Little David" pneumatic wood borer which is capable of carrying augers up to 4" in diameter. These tools work their way, with but little effort on the part of their operatives, right into heavy timbers with an ease that suggests that they are boring nothing more resistant than cheese. No matter where the hole has to be drilled it can be driven straight and true, not to mention rapidly. This is in marked contrast to the awkward tasks that confront the man equipped with the old-fashioned auger. The mechanically drilled hole is smooth and this increases the holding power of the fastening driven into it.

The mechanical borers are called upon to drill a wide variety of holes and these range in size and depth to accommodate tree-nails, spikes, bolts, etc. But it is not enough to bore the holes in this fashion, present-day requirements insist that the bolts be likewise driven home by portable machine tools. To this end pneumatic riveting hammers, such as the steel builder employs extensively, have been adapted to the service called for in the construction of wooden vessels and they are eminently efficient and economical. For handling long and heavy drift bolts, which attain a diameter of an inch and a quarter and a length of quite ten feet in some parts of a timber craft, a larger pneumatic hammer has been developed. This tool calls for the services of two operators and it is astonishing how fast the drift bolts are forced into place. When once driven home the bolts are headed and a much tighter fastening insured than would be possible by hand. Indeed, it has been said by one expert, "The fact that the machines make the work easier tends to increase the care with which it is done and, in addition, there is an enormous saving in labor costs." The pneumatic hammer also is used to advantage in clinching the heads of drift bolts over washers to increase the holding power of the bolts.

In many of the large wooden craft 2,500 tons and over it is a fairly common practice to stiffen them longitudinally by setting into the frames steel reinforcing strips made up of material about ½" thick and 3½" wide. These are laid diagonally in grooves just deep enough to leave the ½" steel flush with the adjoining wooden surfaces. This work has been done to a goodly extent by hand, the shipwright cuting two flanking grooves and then removing the intermediate wood by mallet and chisel. Now there are portable pneumatic grinders that cut or saw the grooves and this leaves a simple job for the handworker to clear out the seating for the reinforcing straps.

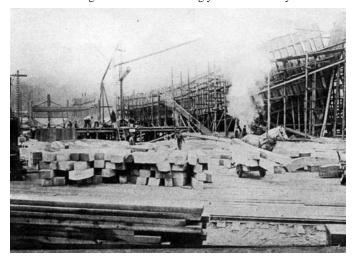
In the assembling of the wooden ship hardwood pegs or treenails, preferably locust or oak, are used in great quantities and logically these cannot be made by hand if precious time is to be saved, nor is it to the interest of the ship builder to buy them from manufacturers engaged in that business as a specialty because there is always the question of transportation or the uncertainty of delivery just when most needed. To obviate this there are today treenail-making machines capable of turning out anywhere from 500 to about 1,000 of these per hour and they will produce them in any desired sizes and lengths from stock material.

Probably none of the special machine tools so far developed is likely to be of greater aid in hastening the building of our wooden ships than the mechanical caulker. Apparatus of this sort have proved capable of replacing hand caulking both on the hull seams of timber craft and on planked decks of either steel or wooden vessels. These tools have been developed after a good deal of experimenting. The best of them has, as an integral part, a unique attachment which automatically feeds the oakum. The latter may be either hand or machine spun. The caulker works at a speed of 1500 blows a minute and is, therefore, capable of doing far more than the most expert hand operator. Besides caulking hull seams, etc, it is particularly fitted to do the horsing on spike work. Manifestly the oakum is driven home hard and tight and the result is a fine job done in fast time.

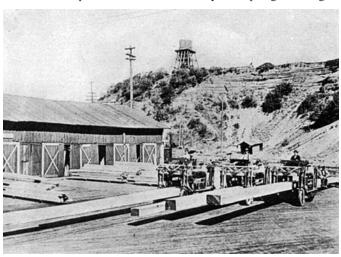
In some yards, portable planers are performing a good deal of the finishing work in shaping cants, knees, bilge stringers, etc, as well as dubbing the joints of outside planking and smoothing off the decks. These tools lend themselves to manifold services and not only save time but likewise the expense incident to the employment of expert craftsmen. In planing decks it has not been altogether easy sailing for these planers where the seams were payed in advance because the pitch, etc, has clogged the knives and also dulled them quickly. Now, however, the best practice is to plane the deck down just short of sanding before paying the seams, and by doing this latter work carefully it has been found comparatively easy to scrape away the excess pitch subsequently.

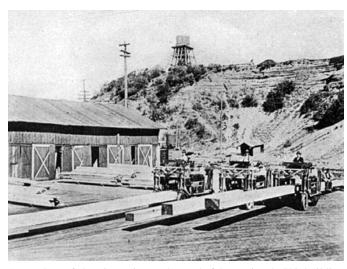
Painting by compressed air is now the approved procedure in a typically up-to-date ship building plant. Spraying takes less paint, less time, and costs less to do the job than would be the case by the ordinary hand brush method. Not only that, but it is claimed that one unskilled man can do the work of from three to 12 qualified painters of the regular trade. The

Wooden ships in the making on the Pacific Coast, where the distance between the standing timber and the building yard is a relatively short one.

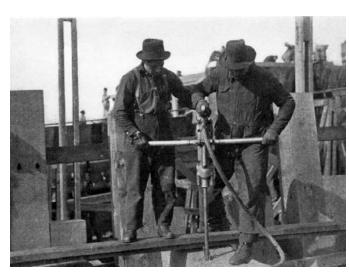


The mill where the bevel band saw holds sway and turns out in a few minutes wooden shapes that would otherwise busy the shipwright for long,





A squadron of electric carriers at the yard of the Peninsula Shipbuilding Company. These handy vehicles are wonders in the way of time-saving and transportational flexibility.



The pneumatic drift bolt driver hammering home a long 1¼" bolt through a deck beam and its supporting sturdy sill. The bolt disappears into its hole with astonishing rapidity.

paint, so it is said, reaches and covers surfaces that otherwise are virtually inaccessible. The lightness or heaviness of the coat can be regulated to a nicety and the resulting finish is absolutely free from brush marks.

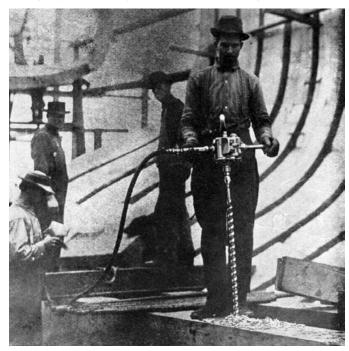
Compressed air, and likewise electricity, are doing many other things in the wooden shipyard to reduce labor, to speed up performances, and to hasten movements in one direction or another. Overhead cranes of special patterns make it possible to shift everywhere about the building slips weights up to two tons and more. Electric carriers are hauling piles of lumber 3½ wide, 5' high, and any length up to 25' and they will also transport big sticks 24" inches square and 60' feet long. Time and labor are also saved by setting donkey engines at the bows of the building ships

and leaving openings low down in the vessels through which keelson timbers, heavy strakes, and the like can be drawn into the craft, by wire-rope purchases without recourse to the usual overhead handling.

To sum it all up, the modern wooden ship building yard is planned and equipped to cut out lost motion. The building processes follow one another in a well-ordered manner so that the raw material is quickly shaped and then passed on to the points of assembling with the fewest possible halts in its journey. It is said that the best results are commonly obtained where shelters are provided over the slips. With the sorts of labor now available it is found that this protective covering contributes measurably to better work and faster performance. This is because the rugged

men of the older days of wooden construction are no longer to be had and, anyway, operations are not so apt to be interfered with by the weather. Finally, those wonder works of the sparmaker are being duplicated every day by machines that turn out beautifully tapering masts and spars that run 125' in a single piece. These are so smooth and perfect that they look as finished and true as steel shafts. Such are the consequences of standardization, the creation of special appliances, and the skilful utilization of ordinary trained workers and unskilled labor. Necessity has demanded that we undertake upon an extraordinary scale things that but a few years back would have been declared well-nigh impossible. And we are going to crown effort with abundant accomplishment.

The Little David Pneumatic Boring Machine makes light work of the deep holes required in the giant keelsons. The operator has to have only a straight eye and a steady hand for his task is but to guide the tool.



The caulking tool can be held in any position and is able to deliver 1,500 taps a minute. The oakum is fed mechanically so that the work of horsing it in can be done rapidly and thoroughly, no matter where the beam is located.



Unlike cars, motorcycles, and airplanes, a boat has a bilge, and oh what treasures it can yield, especially when it has been neglected for years and years. The bilge becomes a forgotten place and what falls there is forgotten. But when a new owner acquires this forlorn boat, the bilge becomes a treasure trove to be explored.

Of course, initially it is just to get the filth out of the bilge that prompts this exploration. Like dust under the bed, filth just seems to accumulate as a natural process. And it helps that the immutable law of gravity causes all things to fall to the lowest place. They would fall to the ocean floor but for the bilge interceding to catch them in its slimy grasp.

It takes a man to reach down into the dark and forbidding waters of the bilge. If a monster lives there, surely it is a biting monster. And what sharp objects might lie below those oily waters, perhaps to poke him? Maybe give him blood poisoning, maybe fungus? But the nastiness of the bilge is the very thing that guards its treasures. Not even a real thief, let alone a casual requisitioner, wants to dip his hand down into the goo of the bilge.

Those things above the bilge are vulnerable to being taken away on a neglected boat. A cleat now for one guy. A turnbuckle later for another guy. A snap shackle might be needed by someone else. A derelict yields up its parts without protest. Even the head in this case had disappeared and the cushions on the settees. The radio was gone and where was the cook stove? And what earthly use could any one have for the engine well cover, but it was gone. The bones of this little derelict boat had been picked over by the buzzards of the harbor.

How sad it is to see a derelict. One's heart cannot but go out to it. A love affair that is on the rocks. Was it a stroke, or possibly cancer, or some horrible accident that caused her owner to no longer be able to take care of her? Surely it was not lack of love, for who could not love this pretty boat? Surely some heart-rending thing must have happened. And now the forlorn derelict sits neglected, waiting to feel the hand of love once again.

Perhaps a death could explain the derelict and the heirs simply didn't care. The yard bill went unpaid and the existence of the boat was forgotten. And now the cobwebs of time and deterioration had taken over. Fortunately she had been stored on land rather than left at a mooring or dock, for otherwise she surely by now would have long since been on the bottom. But rain water now had filled her almost to the gunwales and bull frogs lived in

My heart went out to this derelict. The mast, bent. A shroud, loose. Wooden parts, floating in the water in the interior. It was like seeing a starved kitten half drowned in the gutter. Who could walk by and not give that kitten a chance? The watertight bulkhead that separated her open cockpit from the forward cabin served her well because it kept the oily waters of the engine well aft of the bulkhead. The bull frogs lived in the oil-free water of the forward cabin.

Four thousand pounds of water we siphoned from the boat. It was so high in the cabin that it covered the settees and came to the top of the folding table. That's a lot of water in a mere 17'x8' boat. To siphon her took eight hours at a gallon a minute. And even then she was not bone dry.

But that water in her had served a purpose. Though it was so high it covered the

## The Treasures of the Bilge

By Dick Lafferty

engine, it saved the engine. Might not that engine otherwise have grown legs and walked away? Might not a part have been unbolted as need arose? But the water covering the engine complicated the matter enough that the engine essentially was all still there.

When the water was siphoned down it revealed just one part missing from the engine. Could the engine ever be made to run again? How much damage had been done by being submerged for so long? What make of engine was it? That could not be determined for there was no name plate on it. Without knowing the make of the engine, how could parts be bought for it? But maybe it was just a piece of scrap iron at this point, having been submerged so long. What make it was would hardly matter if it was going to be scrapped. Still it would be nice to know what make it was so that a replacement might be bought that would mate to the drive shaft.

The unknown make of the engine provided a great mystery but the fact that it was a diesel seemed nice. It seemed just right for the boat. As the siphon hose brought the water down, revealing more of the engine, the remaining oily water concentrated into an oily slurry that ran to the deepest part of the bilge and became so thick the siphon hose could no longer pick it up. Left now was the need to get down on my knees and dip out that slurry by hand, but first I wanted to run my hand through it to feel for anything good.

The bigger things were found easily, like a 14mm Craftsman combination wrench, once chromed but now badly rusted. Found also was a 14mm stainless steel bolt still in good shape. But the smaller stuff like washers and small nuts hid themselves in the slurry of lint and rotted rags and pieces of rotted wood and sand that covered the very bottom of the bilge. The solution here was to bail the oily slurry into a bucket to later be poured onto a

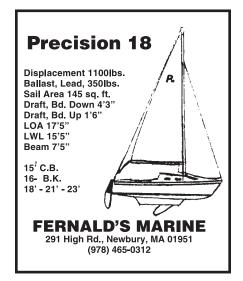
**Fiberglass** Handy Billy 21 Quiet Cruising Speed. Efficient **Quiet Conversation** Classic Special pricing on '07 Demo boats **Southport Island Marine** 207-633-6009 www.southportislandmarine.com

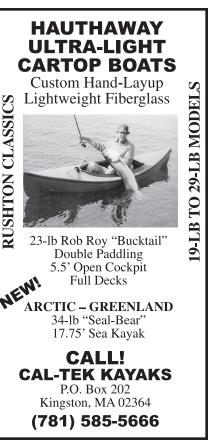
screen and then paw through the drained slurry to see what might be there.

It was in this later sorting that the treasure of the bilge was revealed, for there among the assorted stuff was the missing name plate of the engine. I now knew it was a "Friendship" engine made by Renault. Knowing this I now knew from whom to obtain parts.

Also in the slurry I found the keys to the ignition switch. A little rope start diesel can be run without electricity but to operate the electric starter, an ignition key would be needed.

No gold nor diamond earrings did I find in the bilge, but to me finding that engine name plate was the next best thing for now there was a fighting chance that that engine may be made to sing its song of "Go Boat Go" once again.





#### The International Scene

The US Congress wants all containers to be 100% scanned before entering the US but a six-month test in Europe demonstrated that the cost to US customers will be about \$500 per container.

Shipping giant Maersk stated that demand for shipping will exceed capacity even though demand is weakening and many container ships are on order.

Three of the world's top container ports are Chinese: Shanghai, Hong Kong, and Shenzen, but Singapore remained in first place.

The owners of the container ship Cosco Busan claimed that the US government was at fault for the recent San Francisco bridge crash because it licensed the pilot in spite of his medical problems and a single conviction for drunken driving. "In essence, the United States Coast Guard failed to guard the coast,' the claim summarized.

Iran, Cuba, and Venezuela share many things in common. A new shipping line can be added to that list.

Port congestion for bulkers remained heavy, with about 120 bulkers waiting for loading berths in Australian ports, 61 in Brazil, and 66 at discharge ports in China.

#### Thin Places and Hard Knocks

A very busy month indeed in the nautical bumps and bruises arena as mariners around the world tried to deliver the goods that keep the world functioning.

Ships sank or nearly sank:

In stormy seas off the Philippine island of Maniquin the cargo vessel Edago Expedition sank, taking with it its cargo of 24,000 bags of salt, and only two crewmen were rescued by a passing Indonesian vessel.

In China the small cargo vessel Zhefeng 5 carrying stones sank and five of the crew of

11 were missing.

Quick action by the Indian Coast Guard saved the container ship MSC Denisse from sinking off the coast of Mumbai (the old Bombay).

A small ship carrying Red Cross supplies to cyclone victims in Burma's Irrawaddy delta sank, carrying with it 100 bags of rice, 1,000 bars of soap, and other refugee necessities.

Ships hit things:

At Willemstad (Curação) the container ship Rickmer Rickmers passed too close to the Royal Nayy amphibious landing ship Largs Bay (L 3006) and damaged some containers.

While entering the German port of Emden, the vehicle carrier City of Amsterdam and the vehicle carrier Oriental Highway collided. A case of the attraction of likes?

Land-based structures also took a beating: In India the tanker Jag Pragati hit a walkway at an oil loading area in Haldia Port.

In Malaysia the container ship Giseng rammed into a garden pavilion, nearly hitting two boys fishing there.

Ships hit the bottom:

The container ship Hansa Centurion grounded in the River Scheldt while inbound to Antwerp. It was freed by tugs and escorted to Flushing by three tugs and the sand suction dredger Swalinge.

At Kandla, which is India's leading port, the product tanker Overseas Fulmar went aground, delaying delivery of its cargo of 30,000 tonnes of naptha.

In Australia the bulker Taskent went aground in Gladstone harbor.

At Mile 100 (about 15 miles below New Orleans) on the Lower Mississippi River, the container ship MSC Turchia went aground.

## Beyond the Horizon

#### By Hugh Ware

On the river Svir, the sawn-timber-carrying Sormovskiy went aground but didn't block other river traffic such as tourist boats. (The scenic river connects Lake Ladoga and Lake Onega, the two largest lakes in Russia.)

In Papua, New Guinea, the cargo ship Niu Ailan Coast went aground but soon freed itself without damage.

Off the Egyptian port of Ra Shukheir, the container ship Norfolk Express did the hit-the-dirt thing.

Off Myanmar (think of it as Burma) the vehicle carrier Cosmic Leader was in danger of breaking in two after grounding.

Because of a short circuit the tanker Star Hero ran aground in the Suez Canal some weeks back and insurance companies paid exactly \$1,719,666.86 to the ship's owner for necessary bottom repairs.

Danish waters saw several groundings: The LPG carrier Kemira Gas grounded "softly" on a sandbank and then the master failed to notify authorities. He will be fined "not less than DKK10,000" (about US\$2,117)

But the master of the Russian MCL Trader got sterner treatment after he grounded his ship. He was arrested for being drunk, as was the chief engineer. The mariner faced jail time but the greasy-handed one was released.

An inquiry found that the mate on duty on the coaster Wani Wili was heavily intoxicated when that ship went aground just south of the breakwater at Rønne in February. When it happened he wasn't even on the bridge and the skipper and chief mate arrived there before he showed up.

In the UK the 90' training and survey boat Smit Cymyran hit the rocks off the Skerries and its crew had to be airlifted off by one of the helicopters it supports in their search and rescue operations.

Fires and explosions often killed:

In Indonesian waters a fire, apparently started by a carelessly discarded cigarette, killed one on the ro-ro Dharma Kencana.

North of the Falklands the Korean fish carrier Dong Bang No. 31 caught fire and the crew of 28 abandoned ship to take up temporary residences on other Korean fishing boats.

In a Turkish shipyard the being-built tanker yard-number 52 Selah had an engine room explosion due to high gas pressure that killed one, seriously injured three, and slightly injured five others.

While on passage from Colombo to Chennai, a fire damaged accommodation spaces and killed the second officer on the container ship OEL Aishwarya.

In Russia, a fire on the small container ship *Enisey* killed at least ten at Kalingrad.

At Singapore, while painting operations were underway, a fire on the platform supply vessel Rainbow Star killed one and hurt 14 others.

Ten workers who were working on the civilian cargo ship Yenisei in a Russian naval shipyard were killed by an explosion and fire that swept the vessel.

Other bad things happened:

A chemical leak on the Madeleine at Port Everglades killed three Florida stevedores.

At Shanghai, leakage of CO, into the engine room of the container ship Hakone killed the chief engineer and two others and hospitalized ten.

At Dubai a surveyor checking out the tanks of an aframax tanker slipped and fell to

In a Chinese shipyard the near-simultaneous collapse of two 600-ton gantry cranes killed three crane operators and may keep the busy Hudong-Zhonghua yard from producing ships for many months.

It must be hard to stay awake off the French coast:

The small Polish ship Ina failed to respond to radio calls because its watch officer was drunk and asleep. It missed going aground only because near passes by a patrol vessel and helicopters woke up somebody in time.

But two days later in the Dover Strait another watch officer also fell asleep and the Baltic Carrier did go aground

The Russian cargo ship Ivan Strod was heading towards Korea and Japan when the master radioed that one man had died and another needed evacuation. Shoreside medics recognized the symptoms caused by alcohol poisoning but the sick one died before help could arrive. Then the master radioed that he had a crewman seriously ill with appendicitis. He made it to a hospital in South Korea.

The master of the bulker Morning Cloud went missing off Florida and it is believed he committed suicide. His wife reported he had been depressed and "hadn't experienced such a harsh voyage in 25 years of sailing."

#### **Grey Fleets**

A collision between the Uruguayan naval vessels Uruguay and Commandante Pedro Campbell was not the best way to start off a multi-national naval exercise off Africa.

The nuclear-powered attack submarine HMS Superb crashed into charted rocks in the Red Sea while underwater. After an emergency surfacing it was unable to dive and may be scrapped if repairs to the sonar dome prove

This incident continued the recent year tradition of aggressive British submariners hitting things:

In 2003 HMS Tireless suffered ballasttank damage after running into an iceberg 206' (63m) underwater during an Arctic exercise.

In 2002 HMS Trafalgar hit the seabed off western Scotland during a training exercise that was part of the world-famed (among submariners) but also infamously difficult "Perisher" course for potential submarine skippers. The students were presented with a simulated emergency navigation situation. Post-Its® covered information from instruments and charts so the students had to use tracing paper to work out courses. Monitoring officers became focused on the problem and lost track of where the sub actually was. It hit the bottom at 165' (55 m) off the Isle of Skye. Three crewmen were hurt and repairs cost £5 million.

The mighty do fall! Once a mighty shipbuilding center, the UK is not so any longer. Royal Navy needs double-hulled tankers but none will be built in the UK, the four bidders were Italian, Spanish, South Korean, and a multi-national consortium. The only capable British yards are totally busy with two aircraft carriers and a new class of destroyers.

The aircraft carrier USS Kitty Hawk (CV 63) left Japan for Bremerton, Washington, where the elderly ship (commissioned in 1961 and the last conventionally powered carrier in the US fleet) will be decommissioned.

High scrap prices were irresistible so a New York man stole two steel domes used on the *USS Hampton* (SSN 767). Luckily they were on a pier rather than on the vessel and he was convicted.

Watching accelerating naval growth by its neighbors, India wants to build up its navy in the worse way but is finding it difficult. While domestic yards are gearing up to build two aircraft carriers and large amphibious landing vessels, Russia has proved to be a not-always-reliable source of weapons and ships (the latest is a request from Russia to provide an advance payment of \$250 million towards eventual modification and delivery of the Russian aircraft carrier Admiral Gorshkov) and now France is falling behind on its promised delivery of the technical knowledge needed if India is to build six examples of the advanced Skorpene-class submarine.

Russia is unhappy because China has been making unauthorized use of Russian submarine technology and vowed to sue if China offered its *Yuan*-class subs to foreign countries in direct competition with the Russian *Kilo*-class submarine.

The Burmese navy was hit hard by Cyclone Nargis, losing at least five vessels and many personnel.

The Royal Navy inspected the New Zealand Navy and found parts of it to be "sloppy and unsafe."

Now that world attention has shifted to the Arctic, Canada has awarded a contract for design of six to eight ice-capable patrol vessels.

#### White Fleets

Taking a cruise can be exciting:

Somewhere between Venice and Naples the *Norwegian Jade* had a small technical steering mishap at 22 knots that caused it to heel far enough to spill water from the swimming pool and do other scary things.

At Dubrovnik the *Costa Classic* and the *MSC Poesia* managed to collide. Minor damage no injuries, some excitament.

age, no injuries, some excitement.

In Alaska the small cruise ship *Spirit of Columbia* lost both generators and one engine and accepted a Coast Guard escort to Juneau.

Again in Alaska, fleetmate *Spirit of Alaska* touched bottom and had a damaged rudder. Again an escort by Coast Guard units. Nobody got hurt, though.

In Denmark the passenger ro-ro *Aurora* af *Helsingborg* crashed into a quay at Elsinor. Hamlet was not in residence at the castle and so was not disturbed by the crash.

At Valleta in Malta the new *Queen Victoria* bumped a wharf so hard during its maiden visit into that narrow harbor that the ship suffered more damage than the wharf. Some reports were that throttles became stuck. Other reports stated that the chief executive and chairman of the company that owns the company that owns the *Queen Victoria* was watching everything happening.

And in New York the *Norwegian Spirit* hard-kissed a pier column at a Manhattan pier. The column was damaged, a floor

sagged, but nothing fell down.

A woman may have been attempting to climb from one exterior balcony to another on the *Norwegian Dream* when she went missing about 45 miles off the New Jersey coast.

Two major cruise lines will no longer carry babies under six months and on some longer voyages extend the ban to kids under one year old. The reason? Too often sick babies need better help than can be provided onboard.

Seven Middle Eastern crew members (and their lawyers) will receive \$485,000 for being improperly fired from jobs on the *Pride of Aloha*.

In May the *Disney Magic* paid a near-record \$283,400 for a transit of the Pan-ama Canal but two container ships each paid \$313,000.

The luxury Irrawaddy River cruise boat *Pandaw* was converted into a floating hospital for Cyclone Nagris survivors in remote areas of Myanmar.

A German company is having a 17-passenger luxury cruise ship built in India that replicates the basic design of the 1834 Chinese pirate junk *Red Dragon*. If successful, other junks may follow. These, however, would be based on the fleet of the 15th century Chinese Admiral Zheng He. He led fleets of as many as 300 large multi-masted junks on seven exploratory expeditions that got as far as Africa.

#### Those That Go Back and Forth

At Winona, Wisconsin, inspectors unexpectedly closed the Highway 43 bridge across the Mississippi River because of over-thin gusset plates and the next bridge was about 30 miles away. A ferry system complete with emergency parking lots and shuttle buses was hurriedly set up to feed people onto hastily hired ferries, the tour boats *Island Girl* from La Crosse, and the *Mississippi Explorer* from Prairie Du Chien, Wisconsin.

At least 20 died when an overloaded ferry capsized and sank off the southern coast of Haiti.

A ferry carrying nearly 150 passengers was caught in a storm and capsized in Bangladesh and only about 25 managed to swim to safety.

The Indonesian inter-island ferry *KM Dharma Kencana* caught fire and it was not clear how many of its 706 passengers survived.

In Australia the *Sun Experience* crashed into the southern tip of Henning Island in Queensland. None of the 23 passengers and crew was hurt but the skipper apparently passed out just before the crash and was later evacuated with chest pains.

Philippine authorities were not amused by the low engine reliability of Philippine ferries last month. An engine failure on the Maria Angela left 300 passengers and five buses adrift, the April Rose had a breakdown (due to a hole in the sea chest) that stranded 262 passengers for a while, the same day a breakdown (due to a worn-out brush on a generator) on the Andy 2 left 196 passengers wondering when they would get on shore again, the Super Shuttle 9 drifted for several hours off Camiguin Island, somewhat entertaining its 199 passengers, and the Starlite Pacific lost power just outside the harbor of Roxas and about 400 passengers were buffeted by rough weather for some time. Then the master decided weather conditions were too bad to dock so they spent a nasty night bouncing around off the port while waiting for better conditions and a rescue helicopter replenished depleted food and medical supplies.

**Legal Matters** 

In Australia dumping rubbish and garbage into Port Phillip Bay cost the owners and master of the container ship *Sky Interest* (then named *Sky Lucky*) a fine of \$39,600 (A\$42,000).

The salvage crane *Hua Tian Long*, lifting capacity over 4,000 tons, was supposed

to show up for 100 days of work last June, but didn't, and the charterer now wants compensation for major losses incurred when the company was unable to provide services to offshore oil projects. The crane was arrested when it showed up at Hong Kong to salvage a large overturned tugboat and bail was set at \$122.4 million.

#### Nature

While bunkering at Pireus a large amount of fuel flowed into the harbor from the LPG carrier *Interceptor*. The ship sailed without notifying authorities and was later fined 250,000 euros for polluting and 45,000 euros for clean-up costs.

At Montevideo the bulkers *Sea Bird* and *Syros* collided in the tanker-lightering zone and the *Syros* leaked away 14 tonnes of bunker oil.

Greenpeace's Arctic Sunrise was protesting tuna overfishing in Turkish-Cyprian waters when one Turkish tuna boat protested the protesting. It rammed the Arctic Sunrise at high speed while fishermen threw lead weights that damaged a Greenpeace helicopter.

#### **Metal-Bashing**

Clean-up after a pollution event can be slow. Removal of the deeply embedded stern section of the woodchip carrier *New Carissa* has finally started. The ship dragged its anchor and went ashore on an Oregon beach in February 1999 and a massive oil spill resulted when the ship broke in half. The bow section was towed off the beach but broke free and came ashore again. It was towed off once more and ultimately was sunk by the expenditure of a million-dollar torpedo fired from a US Navy submarine after gunfire failed. In 2002 a jury awarded the state \$25 million for a clean-up.

The chairman of the Pakistani ship-breaking trade group was killed by a mysterious gun attack. He had been a vocal critic of scrap smuggling on the Pakistan-Afghan border.

A South Korean shipyard has designed a 22,000-teu container ship and awaits orders. This exceeds the 16,000-teu design offered by another Korean firm and the 11,000-13,500-teu capacity of Maersk's Eclass ships now in service.

Lack of capacity in Brazilian shipyards has led the state-owed oil company Petrobras to petition the government for more capacity. The company needs to add 130 vessels and 12 oil platforms on the next nine years.

## **Nasties and Territorial Imperatives**

Ship-snatching continued in Somalia as officials there complained that paying ransoms only encouraged more hijackings. Although ship owners had stated that only diplomatic and negotiating channels should be used, the semi-autonomous Puntland region sent troops to free the Antigua and Barbuda-flagged Amiya Scan and some militiamen died in a nasty firefight shortly after the Jordanian-flagged Victoria was released, ransoms probably played a role in both incidents. Awaiting further diplomatic or hard-nosed action were the hijacked Lehmann Trader and the Arean.

#### **Head-Shaker**

In Indonesian waters, workers on an oil platform watched with consternation as a sizable vessel approached and passed within five metres of the platform. Nobody was visible on the vessel's deck or in the wheelhouse.

Local reader Jake Darnell tipped me off to this event taking place on Stiles Pond in nearby Boxford early in June (scene ever so long ago of my kids' summer camp adventures). The Masconomet Regional High School shop class had undertaken the building of a fleet of "one sheet" boats this spring and the fruits of their labors were to meet their moment of truth on this fine weekday morning.

When I arrived I found a modest crowd on hand with the fleet of nine boats lined up along the small town beach at water's edge. Two local rescue boats were already out on the water just off the beach with outboards idling and over in a secluded corner of the parking area an ambulance was at the ready. My initial incredulity at what I perceived as safety overkill was dispelled matter-of-factly when Jake, who turned up to watch, remarked that no way were the parents of this golden new generation going to have their kids exposed to any risk of drowning while indulging in the celebration of their labors in high school shop.

The builders, about 30 or so, as near as I could see all boys, from sophomore and junior classes (seniors had already completed school and were nowhere to be seen) were milling about in the typical high spirits of that age in our lives when escape from school for a day was a treat. When several adults, including the shop teacher involved in setting it all up, wrapped up the prelims, word was let out to launch the boats. A rush to float ensued.

I was not unprepared for what followed for I had examined the boats, all identical in design if not in execution, and had concluded that these were some very unstable boats. Constrained by the choice of design (see following article for details) they were 8' long (standard plywood sheet length) and approximately square in cross section amidships with flat bot-

# The Masconomet Regatta

By Bob Hicks

toms (rockered fore and aft), plumb sides, and sloping front and rear decks. When they were launched off the beach with helpful (perhaps too boisterous) shoves from those who would get their turns later, there was an immediate thrashing about as several of the boats turned turtle instantly, their unprepared crews taken by surprise by their low initial stability.

by surprise by their low initial stability.

This all provided much entertainment for those ashore but the now sodden crews wasted no time getting back aboard in the shallows and, as youth will, most soon mastered the delicate balancing act needed to stay upright and turned their attention to making some forward progress. While bemused by the scene before me I had failed to note that several youths had taken right off without trouble and commenced some impromptu racing towards a marker buoy set out a way on the pond for later formal races. This occasioned some adult shouting in an attempt to rein in the exuberance and bring some order to the goings on.

Order would involve, as the day wore on, match races, tugs of war, and such field sports set on water. In the interim, those less capable or well endowed with athletic skill and balance still had to master just getting in and paddling off carefully without dumping again. Paddling proved to be another hurdle for some as all the paddles had also been built by the class members and included both singles and doubles, some with 2"x4" lumber shafts and ½" ply blades. The weight of

such construction had not gone unnoticed for several shafts were riddled with holes in attempts to reduce weight. Those who had opted for single (short, too) paddles had some tough times controlling direction of travel of their short, skegless craft, and paddling close to the hull almost vertically with a too-short paddle tended to pull the boat right over on its side.

None of this seemed to bother anyone, they were all having a helluva good time and some of the match races which I watched for a while showed some real paddling skills. Others, to be sure, tended to go around in circles, or at least 270s, before reversing sides. But not to worry, it was all great fun getting out on the water in boats they had built for themselves.

As I departed I saw Jake over to one side with a pensive look on his face. For a number of years he had run a boat building course in a junior high school for 200+ eighth graders each year. Jake designed the boats himself and perfected them into really viable craft (not constrained by a single sheet of plywood). Forty or more would take to the waters of Quannapowit Lake each spring in an all day regatta and beach party (we covered several of Jake's events in bygone issues). Now Jake was retired and the program had ceased to go on without him. Today he was witnessing another teacher's efforts along similar lines in another much smaller town and I felt he was missing what he had been doing all those years.

However they choose to do this sort of thing, I salute these teachers who can grab and hold their students' attention with such hands-on creative efforts, and the fact that in these two cases the creativity involved building boats with all the fun to be had from them sure beats out building furniture.



Ready for launching.

But others displayed obvious paddling skills.





Aftermath of first launching attempt.

End of a race,



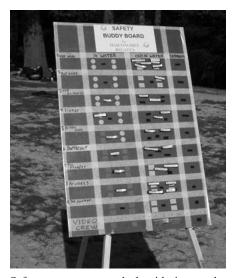




Close competition between two of the more skillful paddlers.



This sturdy double paddle shows lightening holes drilled along its shaft in belated recognition of the weight of this construction.



Safety concerns were dealt with, in part, by this Buddy Board, which established a system of mutual lookout outs that nobody would go missing in the shallow pond.



A selection of single paddles awaits tryout.

The learning curve (it IS a school project!): *Chris Craft* was beautifully built in mahogany ply with bright finished decks. But initially it dumped its builder. Water in the boat was discovered to be quite heavy. Dumping it was facilitated by the narrow beam. With instability overcome, directional control became a problem with short single paddle and lack of a skeg.









# The "One Sheet Boat" Project

The project we will be building for this activity is called the "one sheet boat," hence it is made from only one sheet of plywood and uses the theory of prisms. This will be no extra cost to the school and will not require any extra money.

#### What is a one sheet boat?

A boat made of just a single standard sheet of plywood (The "standard" standard, 48" by 96", there are other standards, too...)

If the transoms, sides, or any other parts of the hull are made of something else the boat is not a one sheet boat but something else.

Chine logs, rub rails, internal frames, butt blocks, seats, etc may be made of whatever but not the actual hull enclosure.

Basic one sheet boat design criteria:

• make it carry as much load as possible

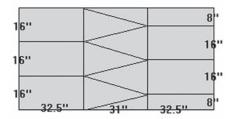
• make it look like a boat.

The load carrying capacity is connected to the maximum displacement of the boat (displacement just before swamping), or the maximum enclosed volume if you like. But what makes a boat look like a boat? If you make it:

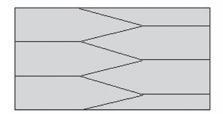
- longer than it's wide
- wider than it's deep
- tapered in at least one end, in at least one plane (horizontal or vertical)
  - · throw it into water
  - and it floats.

then most people will probably call it a boat.

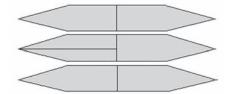
#### So this is how we built them

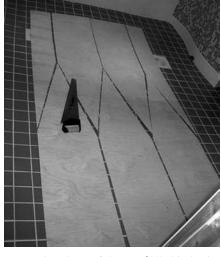


\*The wood required will be from a standard sheet of 4mm plywood. The pattern will first be designed on the plywood.

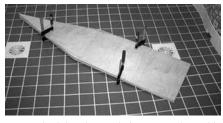


- 2) The strips were then cut out.
- 3) The strips were rearranged, we rounded the corners, and started to be assembled.





We used a sheet of 4 mm (½2") birch plywood to make the boat as light as possible. The weight of a sheet is about 8kg (18lbs). Mark the cut patterns. In this case I'm using the "zig-zag in the middle" layout. Cut along the lines. With thin plywood a hand saw is much quicker than an electric jig saw, cuts will be straight(er) and plywood surface won't get ripped.

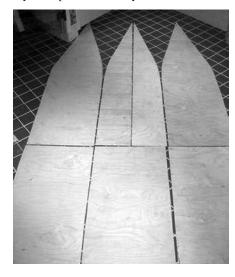


We stacked the plywood pieces together. This way you can round all the corners in one go. We'll remove about 1" of plywood from the corner, smoothing over a distance of 8" in both directions.



A band sander works miracles...

Plywood parts were ready to assembled.





We assembled the bottom with chine logs planed to 60 degrees. Suitable material to start with is about 1"x1.5". The length of each strip is 49" (125cm). Spruce is the preferred wood here, because of the light weight.

We used glue for the \*chines.

Since we wanted a light weight boat and a combination of 4mm ply plus spruce chines adds up less than doing it with 6.5mm (1/4" ply and wood putty chines).

\*A chine in boating refers to a relatively sharp angle in the hull.



Using waterproof glue is the best choice, despite the fact that epoxy resins always seem to manage to create a real mess (on hands, clothes, tools, floors...).

Note: Instead of commercial epoxy fillers (= expensive) we used saw dust (= pretty good) we could have also used wheat flour. Yes, the flour for bread dough. advantages are:

- \*Close to wood as a material.
- \*Much finer than wood dust from sawing or sanding, so creates smoother surfaces.
- \*Almost wood color (light).
- \*Available everywhere.
- \*Very cheap.

Then we installed chine logs to the ends of the bottom.





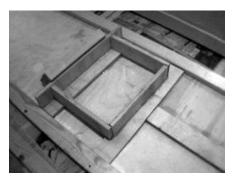
We covered the plywood gaps with butt blocks cut out of waste plywood. The Prism design uses up all plywood from a single sheet.



We assembled a frame/seat support.



We installed the frame.



A seat was then framed out and installed.

Assembled the side panels with the \*gun-

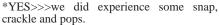
\*The gunwale, pronounced "gunnel" to rhyme with "tunnel," is a nautical term de-scribing the top edge of the side of a boat.

wales. Glue and nail only.



We attached the sides to the bottom.

\*\* Here is the tricky part. We bent the plywood ends together, glue and nail to the bottom chine logs, and filled the open seams from the inside.





We installed a simple foot stretcher.



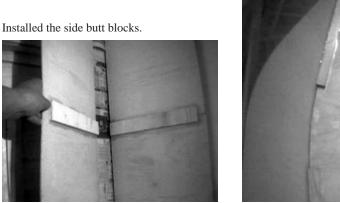


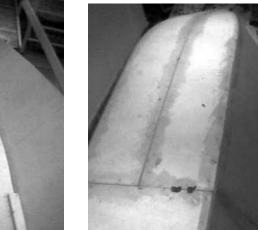
We fit the seat onto the frame but did not glue it on yet. It is so much easier to paint underneath the seat when there is no seat.



ends needed some trimming.







We sanded the boat for aesthetics.

We sanded the seams and corners and apply a coat of primer.



After the paint dried... we tested them in a shallow pond and deemed "seaworthy"... The one sheet boats were ready for their maiden voyage. We placed them in a pool or shallow body of water to pretest. They will fit in a standard size backyard pool.

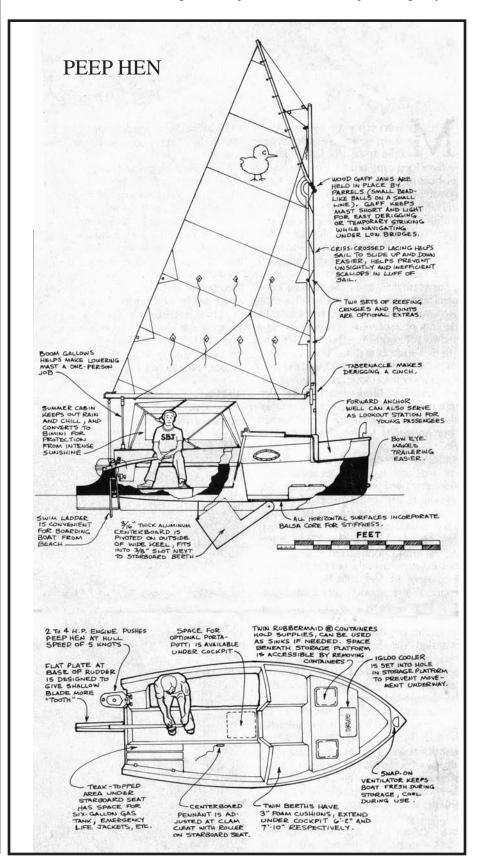
#### The Masconomet Regatta!!!



## Entertainment in Advertising

Twenty years ago Reuben Trane's Florida Bay Boat Company ran a series of cartoon ads in *Small Boat Journal* extolling the merits of his line of Hens: Peep Hen was typical, it had all the charms of a Volkswagen camper. Sadly Reuben is no longer with us and his company no longer exists as far as I know, but his little boats, Peep Hen amongst them, continue to be enjoyed by those who fell for his whimsy as a designer and ad copywriter.

(Yes, I, too, had trouble reading that small print but it is how it was printed originally.)



Brooklin, Maine, is a boating town. This is not news. This town is the home of *WoodenBoat* magazine, WoodenBoat School, and some eight professional boat building shops. The town has a population of 841, half build boats and the other half talk about them. Quite a few citizens make their living harvesting the sea. Boats are the center of our community.

The Brooklin Sailing Association teaches sailing and boat handling to local teens and visitors in the summer months, and Wooden-Boat School teaches boat building and seamanship to folk who are mainly "from away" during the warmer season. We also have the Center Harbor Yacht Club which caters more to "summer people" with its own sailing and racing programs. I won't go into the "Off Center Yacht Club" which races home built Shellbacks for beer on summer evenings.

But what is being done to help our young-sters understand this heritage? Good question. In 2001 boat builder Brian Larkin decided he wanted a change. He picked the Fiddlehead canoe for his project. Brian notes his favorite part of the program is that we have never raised a dime or filled out any paperwork. All the resources come from Brooklin whether it be tools, lumber, hardware, or volunteer labor. The other important aspect is that the kids see the whole process from raw materials (trees) to finished product. Yet another benefit has been visits to local building yards and student discussions with the people there.

Principal David Sullivan, a local, was a big sponsor of the idea but the school board had some misgivings about their insurance, fearing that the school would be held liable. Classes went ahead anyway. Local papers and magazines covered the idea. The Maine State Board of Education awarded the fledgling program with its "Making the Grade Award" in January 2003. As the favorable publicity came in, the liability controversy faded away.

The first building year (2001-2002) started with wood donated by the Brooklin Boatyard and other materials given by the WoodenBoat School. By the spring of 2002 harvest of cedar began on Paul Sullivan and Jill Knowle's property (Paul is not related to principal David). Jon Ellsworth twitched the logs out with his horses and a portable sawmill was set up in Paul's yard to mill the planks. This was done after "mud-time."

The lumber was set aside to cure for the

The lumber was set aside to cure for the summer. Later cuttings were done on Brian Larkin's, then Pip Wick's woodlots. The seventh and eighth grades had a great time with

Brittany.



# Boat Building in Brooklin

By Pip Wick

this phase of the operation as well as the picnic lunch. So the cycle started. This party has been repeated nearly every spring since. We have stickered quite a pile of drying cedar.

WoodenBoat loaned their shop facilities during the wintertime when they were underutilized. They also donated the use of their tools and some hardware and fastenings and Brian (the biggest donor) gave his time as does another builder from the Brooklin Boatyard, Sam Temple. Local volunteers give much of their time, too.

Fiddleheads are a sort of cross between a decked canoe and a large cockpit kayak. They are 10' 9" LOA and 29" beam. There are watertight bulkheads fore and aft and one uses a double paddle, sitting facing forward on a flotation cushion on the cockpit sole with a backrest and foot braces. Fiddleheads were designed by Harry Bryan of New Brunswick, Canada.

In the fall, after WoodenBoat School has shut down and cleaned up for the cold weather, the seniors of Brooklin Consolidated School fetch the unfinished Fiddlehead canoes from the attic and set them up in the ground floor workroom of the boat barn. Once a week for about two hours the eighth grade visits and works on the boats, with Brian and a few volunteers keeping an eye on things. Often there are more overseers than students but this is true for much of the school's volunteer activities, the ratio of volunteers to school enrolment is about two to one.

Brian starts each year with the admonition that we can repair or replace anything except human parts, so be careful of yourselves. We keep close watch on the safety aspects and so far nothing serious has happened. Once, when a photo in a local newspaper article showed a student without safety glasses, the reaction was swift.

We meant to complete one boat a year but some years class time was cut back to one hour a week, and with generally small classes some weather delays and other obstacles such as vacation time and teacher conferences it didn't quite work out. Four boats in six years gets pretty close to the mark.

The boats are started upside down on a strongback. The Fiddleheads have a flat bot-

Front to back: Brenna, Brian, Colin.



tom of white cedar (%6") with a little bit of rocker. The topsides are three (¾6") strakes; garboard, center, and sheer planks planked from the bottom and beveled as each is added. The gains at the stems are cut in with rabbet planes, one of the trickier parts of the job. They are clench nailed and caulked as we go. The other complicated shaping is fitting the oak false stems on the bow and stern and making the backrests and foot braces.

Decking is also cedar, about ¼," but we usually go a bit fancy with the cockpit coamings, scrounging some teak or mahogany from one of the local yards. Likewise, we borrowed a bit of oak for the gunwale guards. We generally use a varnish finish on the decks and in the cockpits but hull colors can cover the rainbow. We haven't yet tried making our own double paddles, the ones that we have are donated, if we need more we borrow them.

To date four Fiddleheads have been built, one (the purple one named *Viking*, the school emblem) was given to retiring principal Sullivan. David was also our most avid tree feller.

While they seem safe, especially with the paddlers seated and wearing full lifejackets, we have not yet taken them more than a few hundred yards from Center Harbor and we patrol with a bevy of rescue craft. There is probably a good margin of safety with all the flotation provided, but pulling teenagers out of 40°-50° water in May or June isn't attractive. I think it might be a good idea if we were to pack the watertight compartments with foam.

It may not seem so to most of the students, it's probably just a weekly break from the classroom to them and an excuse for some outdoor time in the spring. The one time we were able to get the class together for a picnic and paddle on local islands was very popular with the graduating group. While the celebration may mask the educational experience, these students have gone to sea in a boat they themselves created with materials they helped harvest.

We will never know the long term effects of these classes, the students gain confidence and basic skills that may not show for years, long after we're gone. Or they may go on to another skill that seems unrelated. They might even end up building some boats, you never know.

I never got a chance to thank my middle or high school shop teachers for a lifetime of building things, so this is part of my payback.

Brian Larkin.



Last winter reader George Thompson of nearby Essex, Massachusetts, dropped by to invite me on an outing come spring in his 10' modified Bolger Nymph, Phunstuph. George has a commercial clamming license in Essex and built her to get him out to the clam flats in Essex Bay, our local magnificent estuarine tidal basin, so maybe I'd get to see how a clammer works. Well, we made the trip on June 13, a crystal blue sky June day, 75 degrees, little wind and, as it was a Friday, virtually none of the hundreds of motorboats in the Essex River marinas were out on the water. The marinas hold few sailboats, the bay is too shallow for sailing craft other than small centerboarders.

But there was no clamming. The red tide was in and the flats were closed, so instead George took me on a short cruise out to sea as far as the marker buoy for the entrance to the Essex River out in Ipswich Bay a couple of miles off Gloucester's Wingaersheek Beach. With an outgoing tide and little wind the sea conditions at the river mouth, which can be dangerous for small boats during the wrong tide/current/wind conditions, were mellow and soon we parked alongside the marker buoy so George could smoke his pipe and we could chat about his unique craft.

Typical clammers use open outboard skiffs to get out to the flats, pickup trucks if you will. When George bought a bare Nymph hull for \$75 from a local antique shop he decided to do it up differently for clamming with many comforts as well as shelter from weather. As can be seen in the photos he achieved his goal, albeit about \$9,000 later. He has done a superb job designing and building a tiny cabin skiff on that Nymph hull that looks great and works well, with all the best materials. He greatly strengthened the hull structure

## Phunstuph

By Bob Hicks

with added-on laminations to the bottom and transoms and heavy fiberglass over both the inside and outside of the hull and the outside of the cabin. He allows as how it might be his last boat building project, though, as he had to do the work outside in his sister's yard and that was no fun during the winter months. George lives in an elderly housing complex in Essex and there's no place in that sort of "community" to build boats.

"This is the driest boat I've ever had," George remarked and I experienced it firsthand when a couple of larger boats came by us out on Ipswich Bay and we bobbed and weaved over their wakes. The pram bow

Three views of *Phunstuph*.



throws the spray aside rather than up when tackling waves/wakes head on. Underway she rides the seas like a hobbyhorse, careful placement of skipper and passenger to balance the skiff (George sitting right rear operating the outboard and I left front to observe our progress) resulted in little rolling motion over some low oily swells and the few wakes we encountered.

There's a lot of room for two and their gear inside and the cabin enclosure seems to persuade one that the boat is larger than it is when inside. The 9.9 two-stroke Evinrude is more than enough power to push the skiff along. George sort of hopes that with its quite flat bottom under the rear two-thirds of her length that she might plane. But not with two of us aboard and we pulled quite a wake with the revs well up there. Lots of buzz for not much forward speed, not a problem going a couple of miles out and back to the flats to dig clams, but maybe more tiresome attempting a longer "cruise." George thinks a new four-stroke would be much quieter but at \$3,000+...

En route back from the buoy we found the whole aspect of the bay had changed, the broad expanse of water over which we had passed outward bound was gone and now there was a winding channel working its way back towards greater downtown Essex at the head of navigation. Clam flats stretched across large expanses formerly underwater and they were empty. George hopes to get back to work clamming by August. As we neared the marina complexes one of the pontoon tour boats came by heading out and, oh, did the small group of tourists light up when they saw the "cute little boat." George grins at this, he's pretty pleased with how his creation turned out, as he should be.



Heading out to sea...





...as far as the Essex River marker out on Ipswich Bay.





Going aboard is best done from the rear, stepping onto the center of the bottom much as in any open skiff.



Pulling a sizeable wake for a ten horse ten footer.

## Essex Bay Scenes



Modern summer cottage on West Gloucester shore.



Empty clam flats exposed on our return.



Hog Island, once owned by the Crane plumbing family, now conservation land owned by the Trustees of Reservations.



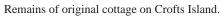
The only house on Hog Island goes back to colonial times.



Conomo Point summer colony, now mostly year-round homes, some still in original family ownership going back over 100 years.



As we round the last turn, greater downtown Essex with its jam of marina-based motorboats hoves into view.





Tide's out and the saltmarsh is 8' above the water along the river approaching Essex.



Famed local traditional boat builder Harold Burnham's shop at the head of navigation on shorefront property that's been in his family for eight generations.









The three of us were sprawled on the deck of *Zebra Dun* as she sailed herself along, headed for the Isles of Shoals in a series of long windward tacks. The early morning calm had given way to a moderate breeze and the warm July sun shone down on us benevolently. "This is when all that money and work pay off," John remarked. It was nice.

John is in the twelfth year of his love affair with his 48' Tancook schooner. He started to build her in 1971 out in California. Readers of early *WoodenBoat* issues might recall John's two articles on the tribulations involved building his dreamboat. Like getting her framed up and ready for planking, only to have to remove her from the lot on which she sat when it was sold by the landlady. Remove her all the way to Texas by truck. But first, take her apart! Then finish her off in Texas. And then the breakup of his marriage when his wife just couldn't accept the idea of life aboard this "workboat" as they would sail from Texas to New England.

Now it is 1983 and Zebra Dun is sailing for the first time in nearly three years. Earlier this week John and Ernie had met at Freeport, Maine, to get her rigged and ready to go with plans to first get the three-year accumulation of marine organisms off her bottom. "They wanted \$300 to haul her and clean the bottom and paint it," John explained. Since John had just given up his job back in Oklahoma af-

# 25 Years Ago in MAIB

## Zebra Dun

There are times when all that money and work payoff!

By Bob Hicks Reprinted from August 15, 1983

ter a two-year stint to raise money for *Zebra Dun's* needs and had sunk about \$7,000 into a new 20hp Diesel and four tons of lead ballast, he just wasn't ready for this kind of price.

I had joined John and Ernie at Kittery Point where they were going to lean the Tancook against the town pier at high tide and then scrape off the bottom and paint it as the tide went out. But somebody else had beat them to the only spot. "Might as well go sailing," was the solution to this. They had sailed Zebra Dun down from Freeport after plans to careen her in Chandler's Cove on Cheabeague Island had been abandoned when they got a look at the tide coming in over the bar they had thought to use. The 30kt northwesterly that first day had skimmed most

of the "grass" off the bottom but the big chunks of barnacles were firmly in place. Zebra Dun's bottom looked like an underwater rock. Knocking off the clumps that could be reached from the dinghy with a hoe hadn't made much of a dent in the accumulation.

Despite all this drag Zebra Dun was moving along, the sun was shining, we had the day to just daysail and talk and eat and drink. Isles of Shoals was our destination only because it gave us someplace to head towards. The sea breeze was making it a beat but that's OK, we could run home later in the day.

John and his girlfriend Cheryl had spent the last two years in Oklahoma managing a ballet company to raise money desperately needed to update Zebra Dun. Sailing that 48-footer with no motor had presented many, many big problems and the 20hp Buch Diesel was going to cost plenty. The iron inside ballast was fusing together, as it will, and John wanted to get it out while he still could and replace it with lead. That would come to well over \$2,000 just for all those lead pigs. So Zebra Dun had sat out one winter in the water in Portland, Maine, and gotten beat up some so John asked a friend to move her up to Freeport for the following winter. Her topsides desperately needed paint after this prolonged abandonment. John wanted to get some ballast on the outside. That bottom needed cleaning. The rigging needed attention. The broken main







boom had been replaced with \$20 worth of spruce 2x6s glued up and then rounded down. But instead we were out sailing.

We never got to the Isles of Shoals. The cumulus clouds built steadily in the sky, the wind built up until whitecaps appeared. We moved along ever more briskly until one of those now very black cloud towers passed over us, beneath it a funny, ruffled-looking dark gray patch of water. It was almost broad on to us and we barely rounded up to the sudden fierce gusts as the wind switched 90 degrees and hit us hard abeam. The full rig was up, main, fore, and jib and Zebra Dun laid well over, the water foamed up over the scuppers, then over the lee rail, as we let the sheets run and all that incredible flapping and snapping and swinging of booms built up. As this squall passed it didn't immediately become obvious where the wind was now going to settle. So the main was hauled down, the jib taken in. The foresail was sheeted in, the rudder put way down, and Zebra Dun just sat there easy as could be while we waited to see what the new situation would be. I was really coming to appreciate the virtues of this schooner rig. Earlier we had been going easily to windward so well balanced that nobody put a hand on the tiller for over an hour, we were all just passengers as Zebra Dun sailed herself.

The wind was now a pretty steady 20 knots or so and gusting some so for a while

we tried to beat on to the Isles. But progress was slow with that crusty bottom so we wore around, put up the main, double reefed, and the jib and began the long reach back towards Kittery. The sky was now cleared of most of the cumulus, the sun again shone, and soon the wind moderated, we shook out the reefs and relaxed again in the sun.

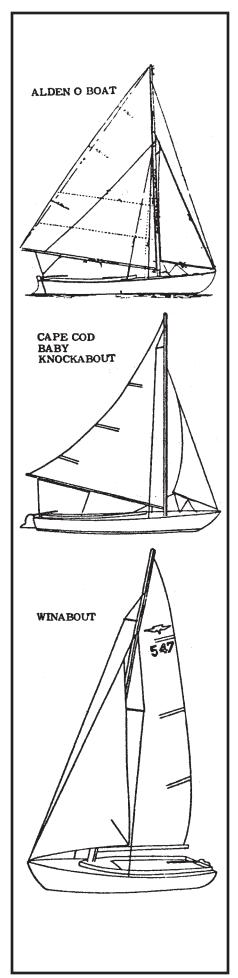
Then John spotted another schooner off the port bow. "That's one of those Colvin designs," he soon asserted. "Just about our length but twice as much room in her. We bore off to look her over. She was reaching south with just a jib and foresail, the latter a junk rig sail with all those horizontal battens. With so little sail up in the now much eased breezes she was easy to overtake. We pulled alongside on her lee and began to visit. Turns out this was the first outing for her new owners, they'd been caught by that squall with everything up and were scared. Now they had discovered that they had a dead battery and could not start the Diesel. Their plan was to turn about and motor back to Portsmouth, they moored five miles up the Piscataqua River and HAD to motor at least up the river with its bridges and winding channels. John offered to shepherd them back and show them a spot to anchor off Kittery Point and urged them to get the main back up in the fast-dying breeze.

They did and we began the reach north again together. Then the owner was success-

ful in starting the Diesel with a spare battery he had discovered below. The wind finally pooped out altogether, they motored on home, and we slatted around a half hour or so waiting to see if any new breeze would spring up. But it didn't so we reluctantly fired up the Diesel and motored the last four or five miles back through the lop that the day's diverse winds had created.

Zebra Dun, despite her fouled bottom, despite her weathered topsides, despite her size, had been no harder to sail than a small daysailer and had stood up far better to the surprise squall. She showed me how true all I had read about the charms of the schooner rig was, how pleasant and flexible this rig was to sail. She also had revealed during our conversations how demanding a boat this size can be on her owner's finances. Even built and maintained by her owner, her size made her costly to keep. Just like a house, Zebra Dun needed an unending procession of attention if she was to fulfill her promise.

John had been coping with all of this since 1971, his emotional commitment to this lovely boat was still total. Even faced with yet-to-be-resolved expenses still looming up ("I sure could use a rich uncle") John was optimistic. And like he had said earlier in the day as *Zebra Dun* eased along in the breeze sailing herself, "This is when all that money and work pay off."



# A Lifetime on the Water Part 4 The Three Sisters

Report by Lionel Taylor

Illustrations by Joy Taylor (This article first appeared in *MAIB* in 1985)

Between the two World Wars three wooden marconi-rigged knockabouts appeared on the boating scene. They were so similar in design and appearance that they could realistically be called the sailing triplets, approximately 18' overall, 15½' on the waterline, 6½' beam, carvel built with the same rather full bow, outboard rudder, and moderate marconi rig.

They were the O Boat, designed by John G. Alden of Boston; the Baby Knockabout, designed by Charles S. Guerney and built by the Cape Cod Shipbuilding Company of Wareham, Massachusetts; and the Winabout 18 (later the Commander), designed by Myer and built by the New England Marine Company of Boston, Massachusetts. These three sister boats sailed and raced with, and sometimes against, each other in the same waters (the Northeast) in the same period of time (the 1920-1930s) with the same degree of outstanding success.

Even though the boat was not the first of the three to appear on the scene, we might say, because of its immediate popularity and the prestigiousness of its designer, the O Boat was probably the best known of all the sisters. John G. Alden designed this 18' sloop at the request of a number of Marblehead yachtsmen who had come to him concerned that their children had no interest in sailing. This, they felt, might have been due to the fact that they frequently crewed on their father's boats and had little chance to demonstrate their individuality. However, their fathers felt that all this would be different if they had a chance to sail, race, maintain, and possibly own their own small sailboats. So John Alden was charged with the job of designing a safe yet fast club racer that the youth of the day could handle in the local protected waters. However, just in case they wanted to take the boat out themselves, their fathers insisted that the boat be capable of handling "the rough seas of the open waters" as well!

Subsequently the July 1922 issue of *Yachting* magazine announced the introduction and reviewed the design of Alden's 18' knockabout. Describing it as "an able little craft," the magazine went on to say that "orders for a great many of these boats had been placed and they would be raced in different localities on the Atlantic Coast that summer." This early design later became known as the "169" version.

The Marblehead fathers must have faithfully backed the O Boat design because the class they established grew from 16 starters in 1923 to 22 starters in 1924. The boat performed well and word got around. Yacht clubs and their members from Maine and Rhode Island as well as those from other parts of Massachusetts bought the O Boats and started racing.

The class continued to grow until in the late '20s, with 25 boats showing up at the Marblehead starting line, a disastrous squall hit the racers. Many boats capsized and apparently, as a result, their popularity began to decline. Their number dwindled to eight and in 1931 to zero.

Apparently aware of the weaknesses in his rig, John G. Alden introduced the "188" version of the O Boat, a design he had also originated in 1922 but had not put into production. This second version incorporated major changes in the waterline length, the beam and ballast, as well as the sail area. The boat was a little shorter, heavier, and wider and had less sail than the "169" version. The sail changes were all in the mainsail, the jib and spinnaker remained the same. These alterations made the new sloop slower but more stable than the first, more tender model sailed at Marblehead.

As inquiries began to pour in about the new design from all parts of the Northeast, John Alden decided to make a study of the prevailing weather conditions of the areas in which the boat was to be sailed. Based upon this data he could then recommend to a prospective customer the "169" or "188" version, or a combination of the two hulls and rigs, as the best boat to buy for the local sailing conditions. Although this decision ended the class as a true one-design, since sometimes neighboring fleets were not identical, it made a stiffer boat available when local weather conditions required it. Sales picked up as one version or another became popular in Prouts Neck, North East Harbor, and Blue Hill, Maine; Cohasset, Hingham, New Bedford, Nonquitt, Rockport, South Boston, South Dartmouth, Wellfleet, and Marblehead, Massachusetts; Watch Hill, Rhode Island; and Cedarhurst, Port Jefferson, and Upper St Regis Lake, New York. On Long Island Sound the "188" version became popular as the JA class.

From John G. Alden's notes we find that he recommended that Watch Hill, Rhode Island, and Cedarhurst, Long Island, get the "188" (second) model; that because of the light airs on Long Island Sound, Port Jefferson get the larger "169" sail plan; and that Salter's Point and Nonquitt, Massachusetts, have the smaller "188 sail plan with the original hull.

By 1930 over 250 O Boats had been built by several builders, including Messrs Chaisson, Chamberlain, and Graves. But once again the boat as a racing class at Marblehead began to dwindle. Yet between seven and 13 Alden Os from other Massachusetts yacht clubs still continued to race at Marblehead Race Week right through the mid 1930s. Of course, for many years a large number of Alden's versions and combinations continued to cruise, daysail, and race in local club regattas. All in all, *Yachting* reports that a score or more clubs built 500-600 of these boats over the years.

Today in 1985, like a species of bird or animal that was thought to be extinct and is later found to exist on a remote island, the Alden O Boat still is sailed and raced on a small boot-shaped lake called the Upper St Regis in the Adirondacks in New York State. Originally 25 boats were purchased and brought into this area and through the enthusiasm and tenacity of their skippers lived through the decline and virtual disappearance of the class in the other sailing areas of the country. As a matter of fact, 21 of the 25 boats raced together there as late as 1975. That number was down to 18 in 1983 with four new boats being built.

In Maine there has been a resurgence of the Alden O Boat. According to Mr Donald G. Parrot of John G. Alden, Inc, they made photographic copy plans of the tracings in their files for builders because the original drawings were in such poor shape. In Kennebunkport the Landing Boatshop, an apprenticeship program, is custom building the Watch Hill #169 version of the O Boat. They have, in fact, built three in the last two years and were anxious to build at least another one in the spring of 1983. According to Mr Clifford Hurst, Business Manager of the Boatshop, it is a true duplicate of the one John Alden designed in 1922 with a few minor exceptions, some of the rigging and hardware has been substituted by what is available on the market today. The deck canvas has been laid on plywood instead of planking and the centerboard is made of fiberglass and plywood rather than oak. Otherwise the Boatshop's Alden Os are planked in northern white pine over oak ribs and keel and have a brightly finished mahogany transom and sheer and other ash or oak brightwork. Bronze fittings are used throughout.

By the end of 1982 two boats had been sold to owners in Massachusetts while the third was waiting to be delivered. It is interesting to note that one of these boats was built using the WEST System® of cold molding rather than the traditional methods.

Some years before the appearance of the Alden O Boat a number of a slightly smaller sisters were being built in the Northeast. Despite the slightly lower aspect ratio rig you still had to look twice to distinguish this 18-footer from the one designed by John G. Alden. Designated as the Cape Cod Baby Knockabout this marconi-rigged sloop, unlike the O Boat, was built exclusively by one concern, the Cape Cod Shipbuilding Company of Wareham, Massachusetts. Eighteen feet overall, 15'6" on the waterline, the Baby Knockabout had a beam of 5'10". With Virginia cedar smooth planking on oak on a 1/2" thick white pine, canvas covered deck, and Douglas fir spars, her hull, with the exception of the beam, was almost a duplicate of the 169 version of the O Boat.

The Cape Cod Knockabout was a wellbuilt, safe boat manufactured by an old reputable company that had been building boats since 1899. The first Baby Knockabout was designed and built in 1918 by a Captain Charles Guerney. Guerney was neither a sea captain nor a sailor, yet he designed and built many fine sail and power boats in his time. Guerney was, by trade, an accomplished wheelwright who, along with brother Myron, operated a shop on the main street of Wareham, Massachusetts. Curiously enough, with Myron as shop foreman and Charles as salesman/designer, the company soon began to build dories for fishing and pleasure under the name of the Cape Cod Dory Power Company. It was during this time that Guerney took another look at the small 18' sailing knockabout he first built in 1911.

With an infusion of outside capital in 1921 and a plant move to Narrows Road in Wareham, the new organization called the Cape Cod Shipbuilding Company began to produce all types of sailboats including the Baby Knockabout. The popularity of the boat began to grow and by the mid '20s a fleet of Baby Knockabouts raced in southern Massachusetts.

Termed the "poor man's yacht," the first Baby Knockabouts cost approximately \$175, including a free sail-away lunch. According to Mr E.L. Goodwin, present treasurer of the still-existent Cape Cod Shipbuilding Company (in 1983—Ed), the Baby Knockabout was manufactured on the original mold built by Charles Guerney himself who, Mr Goodwin goes on to say, had no training as a designer.

Goodwin also doesn't believe any early plans existed for the boat.

The original hull specifications changed little over the years. Originally she was 18' long, 15'9" on the waterline with a draft of 14" with the centerboard up. Guerney's hull design was well-suited to the choppy, shallow conditions of Buzzards Bay upon which Wareham is situated. The rounded bilges took the short seas well and the deep-footed bow reduced pounding by cutting through the waves rather than riding over them. Her moderate beam was compensated for by a heavy 4'2" centerboard weighted with lead and 350lbs of inside ballast. The boat drove well to windward and tracked fairly well running downwind. The excellent hull design is one of the reasons for the Baby Knockabout's success down through the years.

The same cannot be said for the rig. Because like the Alden O, the Baby Knockabout was especially adapted for the boys and girls of the area so that they could "learn the art of seamanship" as original sales literature stated. Guerney selected a low aspect ratio rig (approximately 1½:1). The combination of a large main, small jib, and rudder gave the 18-footer a heavy weather helm. Whenever the wind blew over 12 knots the boat would head up safely into the wind but when the weather really piped up, the boat was very difficult to control.

It wasn't long before more experienced sailors started to make changes to the rig to correct the deficiencies. A fuller main and larger jib were added, resulting in a taller aspect ratio rig. The boat's sailing ability also improved when the centerboard and rudder were made larger. Despite the fact that the Cape Cod Shipbuilding Company later incorporated a lot of these changes into their new boats, they claimed in their literature that "the (old) rig gave the boat a sporty look." In terms of the appearance of today's modern sailboats that statement might appear to us to be a slight exaggeration. However, the buff-colored deck and cockpit with the white topsides and green bottom readily identified the boat that Mr. Goodwin claims was "the largest class of one-designs ever built by one company before the days of fiberglass.

The sale of the Baby Knockabout became widespread and by the 1930s a fleet of one hundred boats raced on Long Island's Great South Bay. Fleets also existed in eastern Connecticut, Rhode Island, New Jersey, and Maine. However, it was in southern Massachusetts that the fleet grew to great prominence. Eight yacht clubs joined together in 1938 to form the Baby Knockabout Association. An annual regatta was held, the winner of which received a trophy sponsored by the Cape Cod Shipbuilding Company. Sixtyseven boats crossed the starting line in 1940, making this race the biggest event in the history of the class.

Sailors must have been race starved after World War II because, in 1946, a fleet of 51 boats showed up for the first regatta held at Waquoit, Massachusetts. Enthusiastic racing continued through the year 1950, which was not only a successful season but one in which a change was made to virtually all of the class specifications.

Perhaps it was the cost of remaining competitive with these new class rules that reduced the number of racing enthusiasts in the next few years. However, it wasn't until the 1950s that simultaneous events almost brought about the demise of the class, the Korean War that took many of the sailors into service, the Cape

Cod Shipbuilding Company ceased production of the Baby Knockabout, and Hurricane Carol damaged or destroyed 50% of the existing fleet. Owners scurried around repairing and buying up second hand boats to keep the fleet racing. Clearly, the boat needed a new builder and some drawings from which to manufacture her.

There is some confusion as to what happened next. Mr. Goodwin tells us that "... various plans of the rig, rudder, centerboard, etc, were drawn at a later date," undoubtedly from the finished product, "...and toward the end of manufacture at the Cape Cod Shipbuilding Company, some outside naval architect took off with what they considered a set of plans." Other sources seem to indicate that a Mr Robert Stanton Fox drew up plans for the boat based upon Prince Crowell's *Imp*, one of the existing wooden boats.

Whichever event, or possibly both, occurred it was really the postwar use of fiberglass that saved the Baby Knockabout from extinction. A wooden prototype mold was built and the first fiberglass hulls were turned out in 1959. In 1964, after 46 hulls were built, the mold was sold to the 18' Knockabout Class Association. The Association licensed builders to fabricate a custom made fiberglass boat as late as 1978.

Except for the hull, the Baby Knockabout is a different boat today than what it was back in the 1920s. Change and innovation have been the apparent watchword of the class. Improvements cost money, however, and the Baby Knockabout can no longer be dubbed "the poor man's yacht." Virtually every component of the boat has been changed, it has a smaller main a larger jib and rudder, the sails have been redesigned, and a double shroud has been substituted for spreaders. The boat has a larger, heavier centerboard and a spinnaker was added and changed three times, even the battens were altered!

Fewer changes than were made on the Baby Knockabout have caused other sailboat classes to become extinct. Perhaps making the one-design specifications more strict has helped the class to survive, however, limited changes can still be made to the rudder, centerboard, and rig.

Construction was still going on as late as 1978, four to five boats being built a year. Materials of the highest quality were used, matched teak for the coamings and cyprus or redwood for the floorboards. The cost of the boat in 1981 was approximately \$4,500.

Forty to 60 of these boats raced that year in regattas which included a National Championship and the SMYRA Championship. Fleets are still active in Rhode Island and Lake Champlain in addition to southern Massachusetts. Even some beautifully maintained "woodies" show up at the starting line. And, of course, there's the odd daysailer appearing here and there, still enjoying the comfort, spaciousness and speed of the modern design and rig.

Far from the least of the three sisters is the marconi rigged sloop called the Winabout 18 (later the Commander), built by the now defunct New England Marine Company of Boston, Massachusetts. She came on the boating scene in the middle of the '30s after the Alden O and the Cape Cod Baby Knockabout had made their debut. Eighteen-and-ahalf feet overall, 16' on the waterline, with a 6'9" beam and 210sf of sail, she was the largest of the three sisters. Yet when you got her together with the other two boats for a club

regatta she was indistinguishable, moderate rig, carvel built with the same full bow and outboard rudder, just slightly larger than the "169," or first version of the Alden O Boat.

The Winabout, like the O Boat, was built in two versions. The first, designed by Myer in 1936, had a long boom and a working jib. The second, and more modern model, called the Commander, with a higher aspect ratio rig, a shorter boom, taller mast, a semi-overlapping jib, and a parachute spinnaker appeared in 1940. The hull of the Commander was a little beamier and slightly shorter on the waterline.

It is the original version of the Winabout with which I am most acquainted. Endorsed at such yachting centers as Marblehead, Manchester, Mamaroneck, Cape Cod, Newport, Long Island Sound, and the New Jersey coast, early literature touted sailing Winabouts as being "no better sport for boys, one summer on a sailboat will do more to build up a boy's health and moral fiber than any known pastime."

Although it can be said that this kind of advertising might have been a bit stilted even for the mid-1930s, I personally can attest to the New England Marine Company's claim that the Winabout 18 was the "sensation of the past Motor Boat Shows." It certainly was the hit of the 1937 New York Boat Show as far as I was concerned because my father came away the proud owner of Winabout Hull #17, possibly convinced that my health and moral fiber (not to mention his own) had everything to gain from the \$500 purchase!

As a young teenager I can still remember standing on the Boat Show floor looking up at the 27' mast that seemed to tower to the ceiling of the Grand Central Palace. If we'd just contracted to purchase the newly planned 12-meter yacht *Northern Light* I couldn't have been more excited.

Spring took a long time coming that year but it arrived at last and with it the delivery of our new boat. In April she sat on her

wooden cradle in the yacht club parking lot of Echo Bay, New York, waiting to be launched. She had a gleaming white topside, green underbody and deck. She was a sturdy, roomy beauty ready, as the sales literature quoted, "to withstand rough waters and rough usage" for many years ahead.

She probably would have stayed in the family more years than she did but World War II came along, I went into the service and my father sold the boat. Still she served us several years as a racer, daysailer, and cruiser. Fitted with a tent cockpit cover for \$28 (we could have bought instead a "portable summer cruising cabin complete with bronze fittings stanchions and side curtains" that the New England Marine Company claimed could be set up or taken down in less than ten minutes, all for the affordable sum of \$89!) and a small Evinrude outboard that fitted into a well in the rear deck, we cruised all over western Long Island Sound. Because she drew only 10" of water with the outboard retracted, we were able to pull the boat up on the beach at night and camp out.

Although the 9'4" long cockpit could accommodate our family of four under the tent cover in case of rain, two of us usually slept on the beach in good weather and two in the boat. Beaches like those on Eaton's Neck and Lloyd Neck were almost deserted in those days so there was no reason to stop at a yacht club or pay for a rented mooring for the night (marinas were few and far apart in those days).

However, most of the years we had the Winabout 18 were spent racing her: Larchmont Race Week each summer, the YRA of Western Long Island Sound regattas and, of course, the local club races. The Winabout Class was large, between 500-600 boats were eventually sold but the racing turnout on western Long Island Sound was only modest, sometimes no more than three or four boats. However, competition was keen.

It was during these club races, when occasionally our boat was the only one of her class to show up at the starting line, that the race committee arranged to have us compete against one of the other sisters that was in the same straits. These club races produced the best, most spirited competition with finishes usually within minutes of one another after  $3\frac{1}{2}$  miles.

With no inside ballast it took four of us to hold our Winabout down on a windy race day. With her 6' beam and 200lb centerboard, however, I recall having to tuck in very few reefs in the course of our many races.

We did well, winning our share of races including Larchmont Race Week in 1939. However, in that same regatta in 1940 the bottom fell out, not only of our racing record but also of the Winabout as a one-design class in western Long Island Sound. When, as class secretary, I invited new boat owners to join the class and race at Larchmont, I had no idea that the New England Marine Company had redesigned the 1940 "18" into the new Winabout Commander. You can imagine my surprise when I saw this sleek, short-boomed, overlapping jib version appear on the starting line. To make a long story short, the original "18" was no match for the newer model regardless of what the New England Marine Company had to say. The resultant changes in the rig of a supposed one-design, including the addition of a parachute spinnaker for downwind work could not be resolved. The start of World War II the following year didn't help boost the Winabout's sales or popularity so the boat as a one-design class on Long Island Sound died an inglorious death. There were a few more club races held between the three sisters for a year or two more but even those stopped as many of the men and boys who raced in them went off to war.

Although a few boats reappeared after VJ Day, they soon disappeared to be replaced by many of the daysailers we know today or their predecessors.

	Alden O 169	Alden O 188	Winabout 18	Winabout Commander	Knockabout
Overall Length	18'3"	18'1"	18'6"	18'6"	18'
Waterline Length	15'6"	15'5"	16'	15'9"	15'6"
Draft, Board Up	11"	11.5"	10"	12"	10"
Beam	6'2"	6'8"	6'	6'5''	5'10"
Total Sail Area	20	192	210	185	170
Ballast (lbs)	450	550	NONE	NONE	250
Total Weight (lbs)	1800	2000	2000	2000	850
Price	\$600 (1922)	\$600 (1922)	\$499 (1936)	\$500 (1940)	\$481 (1934)

The 14' Roamer dinghy is built for cruising, rows in a calm, and can right itself after a capsize. Eric Coleman, a founder of the Dinghy Cruising Association in England, designed the Roamer in 1972 to "look after the crew." Owners say it does so very well. While the design appealed to me, I had by chance sailed a boat with a boomless rig. Something I had assumed would always be there, a thick piece of wood swinging rapidly over my head, suddenly wasn't there and it was very pleasant.

This led me to ask if a boomless rig could be used on the Roamer. I also thought it might possible to draw a stronger, simpler sheer line. The cat yawl rig, which can be boomless, is the simplest rig that provides certain maneuverability according to Philip Bolger. These thoughts led me to sketch a cat yawl rig for the Roamer with ensuing changes in the design of the deck and rudder.

The boomless standing lug follows a handsome simple design by John Leather. In the 19th century 'many small beach boats and working craft were rigged with a standing lug mainsail and a standing lug, spritsail or "leg o'mutton" mizzen sheeted to an outrigger and set on a mast stepped on the inside of the transom, to one side of the tiller arc, a handy and practical rig for boats from 14' to 18', leaving the middle part of the hull clear for people to row or fish" (Spritsails and Lugsails, p81). The mainmast swings on a tabernacle into a well. When reaching, the tack of the main can be moved to the stem to create the lift of a dipping lug. Both sails have brails.

To accommodate the rig the foredeck is lower and the stern higher than in the original design. The stern flotation is a "poop deck" with the tiller going over it. The rudder needs to be managed from the cockpit. Perhaps the best design would be that used in sailing lifeboats about 1900. The rudder slid up and down on a rod. There was a downhaul and an uphaul going to the cockpit.

When crossing shipping lanes an outboard will be needed. A well is desirable.

The cat yawl would need to have the self-righting ability and other seaworthy qualities of the original design. This should

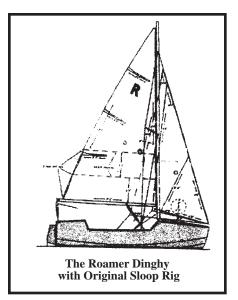
### The Roamer Dinghy Proposal for a Cat Yawl Rig

By Duncan Wright

Reprinted from the *DCA Bulletin* Dinghy Cruising Association (UK) Newsletter Summer 2007

allow certification in Category C of the Recreational Craft Directive, for sailing in Force 6, in 6' waves. With this proposal in mind I'd like to consider its advantages and disadvantages. Two experienced Roamer sailors had some thoughts on the proposal.

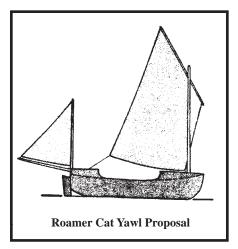
David McClellan built his own boat. He and his wife then sailed along the coast of Holland for six weeks. He knew Eric Coleman, who told him, "Follow the plans, put it in the water and go sailing, change nothing." McClellan wonders if the cat yawl rig would cause her to lose much of her windward abil-

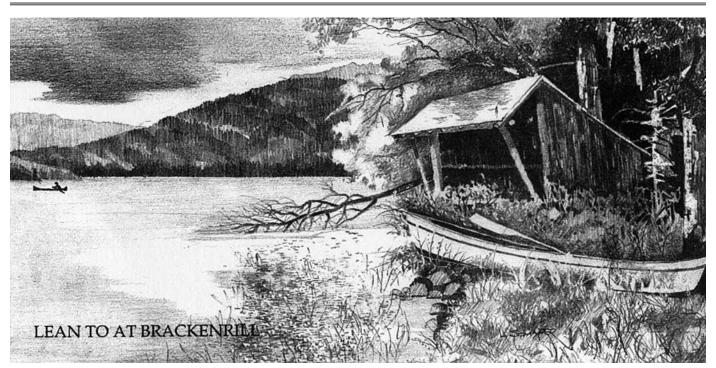


ity and drive. "She needs drive, as do most heavier boats." He had complete confidence in the boat as it was designed, even though just 14' long. "Roamer pops up after a knockdown. Stay in the boat as she recovers. She's more like a keel boat than a dinghy."

Charles Proudfoot, another Roamer sailor, thinks the cat yawl rig might place the center of effort so far forward as to bury the bow. He says that the original Bermudian design works well. "Double reefed in Force 6 she is well balanced." He likes the looks of the cat yawl. But he adds that the original Roamer looks very well with different colors for the hull and buoyancy tanks, chunky varnished rubbing strakes along each side, and a painted boot top. Overall he thinks the Roamer is good as designed. "This is the boat that is going to get you home when the weather turns nasty, this is the boat that is going to look after you in a blow."

Could the cat yawl design provide a more convenient rig while preserving the qualities of the original Roamer? Possibly. But given how well the parts of the original design fit together, modifying it may be difficult. Instead, one might consider drawing an entirely new design for a self righting cat yawl.





You know how sometimes it would be better to give up before you even get started? I've never quite figured out how to tell when it's one of those times. At least while it's still early enough to not start, that is. When it comes to boats, I'm one of those guys that can turn a blind eye to what it's going to take to "get her up and running." What it's RE-ALLY gonna take, that is. Oh, so many, many projects. So few willing listeners. But hang in there, you just might find yourself looking back from the word picture. It could happen.

I've got one right now. I should have never, ever taken this one on. But it was a natural. Picture this. Someplace between my fifteenth and seventeenth birthdays I was, yeah, sixteen. For me at least, the only part of the span between birthday cards that I cared all that much about was the summer part. Now summer spent in the Gobi Dessert, or at the top of the Himalayas, might have been intriguing to some folks. No, SUMMER for me meant pretty much one thing. BOATS. Sure, we're talking two full octaves above the baseline here.

Of course, girls had a part in making things interesting. Actually, we all know the difference between "interesting" and "agonizing." In this case, most of the guys I ran around with were of a single opinion, the ONLY way a girl would actually be interested in any one of us was if (a) we somehow, by osmosis, discovered how to not resemble her own brother (whom we probably already confided in on a daily basis about, yes, girls), and (b) we had a car. Back then most 16-year-old boys didn't actually have a car. They got to use a car. I had an option (c) and it may have worked out better than I knew at the time.

I not only knew how to operate a boat. I had one of my own. Granted, my little 12' made-over runabout wasn't quite

### Boats Really Don't Make Sense

### So, How Do Most People Know When It's Better Not to Start?

By Dan Rogers

"factory stock." But like I said, I KNEW HOW to handle boats. If I took one out it came back in one piece. I said please and thank you. Yes, people let me take their boats out all by myself. And yes, sometimes with their daughters.

It was during that last summer of national innocence, 1963. These nice people just around the beach from the Boy Scout Camp (yeah, I can hear the jeers, "...rooty toot toot, rooty toot, we are the boys from the Boy Scout troop. We don't smoke and we don't...") who included some of us in their summer water skiing, bar-b-ques, etc. But wonder of wonders, they talked to us as if we were actually self-directed young men who would some day take our places in the world. Something that precious few of the grown-ups from that era managed to understand or admit. And they had this almost new, factory complete Glasspar Avalon, 65-horse Johnson, mechanical steering. "Of course, you fool, electric start." And they trusted me with that little gem. Yeah. The kid who habitually wore the "When You're Older" sign around his neck at home. They trusted me to take that screamin' machine out onto the lake and turn gasoline and oil into pure JOY. Their gas even.

So when I asked about, and discovered that, a certain 1967 Glasspar Avalon had fallen on hard times and could be had for basically nothing, well, it's easy to imagine the wheels churning in my head. Even well before I had the trailer hooked up this little girl had been renamed, *Summer of '63*.

Sadly that was before the mismatched wheel bearing and hub incident in the parking lot on Fourth of July weekend. That was before the dual carb, electronic ignition-fired 50-horse Merc that was really not big enough started ailing. That was before those thin spots in the bottom actually turned out to be Bondo patches and broke loose. And, sorrow of sorrows, that was before the cracks in the transom revealed a "wet graham cracker" core that was on the way to launching itself and the Merc into the bay with about one more "hit it."

So here I am again with this poor little boat that depended upon me to save her. And if she didn't need a trailer rebuild and rewire, a bigger engine, complete hull reinforcement, complete interior replacement, stringer and transom core replacement, and, yes, a new paint job. Pretty much, I have to admit it. The only original part of the boat remaining at that point was the hull shape. And while a most lovely hull shape, I would inexorably mess with that before all was said and done.

I've advertised a "for sale" trailer and a "for free" boat. Nobody who realizes that they can't just stick in the key and roar off in this "free" boat has been willing to take the package. And for my own weak-willed self, I just can't work up the gumption to "dispose" of such a glowing ember of my youth.

So how is it that other people know when not to start?

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If you look around at the Antique & Classic Boat Shows and see all of us with gray heads it doesn't take too much math ability to realize that the Antique & Classic Boat Society needs to grow its membership with younger people in order to just maintain current levels in the coming years. Many of the club leaders are business types who would not be satisfied with maintaining and insist on plans to increase the membership. There have been a number of propositions for accomplishing this including "setting the stage" for growth by raising the dues, which falls into the category of wildly optimistic. One plan that everyone keeps coming back to is raising the cutoff year for a boat to be a classic and making more efforts to include early fiberglass boats and their owners.

In the late 1980s I was working late with a sign painter friend, having a couple of beers, when we decided to create the "just say no to fiberglass" bumper sticker which was a takeoff on Nancy Reagan's slogan "just say no to drugs." Despite the efforts of Nancy and myself, both fiberglass and drugs are still with us, and besides my bumper sticker no longer reflects the official mood of the ACBS. I haven't always agreed with ACBS policy and I do have my doubts about a big push to increase the number of fiberglass boats at shows.

At the Bay State Woodies Show we have had a few fiberglass boats every year, some of which have been very well maintained and are very original and high scoring. The Bay State Chapter has not gone out of its way to solicit fiberglass, nor has it made any effort to discourage it. Members' boats are seen as a reflection of their interests and all members are welcome. I think this is a good way to deal with a mix of boat types and it makes for an interesting show. I don't believe that a chapter wants to turn away a good person because he or she is interested in fiberglass boats, but at the same time the chapter doesn't want to drive wood people away if fiberglass becomes prevalent.

For me, in an artistic sense, the appeal of fiberglass boats is in the styling. The material itself is pretty bland whereas varnished wood has a beauty for me, regardless of how it is styled. Early glass boats coincide with the era of fins and neo art deco. These are fun to see but a few fins go a long way, particularly in the early days there were engineering limits to what could be pulled out of a mold while wooden boats were relatively unlimited in shapes that could be framed up and planked. For instance, there were no fiberglass equivalents of the 1949 Fairliner-Torpedo. Fiberglass started as a material more practical for smaller boats so many are out-board powered. After WW II boating became less of a rich person's pastime, and even before fiberglass displaced wood few builders offered anything like the spectacular big triples of the '30s. Whether it's cars or boats, at a show it's always fun to get a chance to see the best that money could buy. That would be a Gar Wood, not a Glastron.

I've never restored a fiberglass boat so I look in from the outside to guess how enjoyable the process may be. A good friend did restore an early glass Century here, however, and I remember hours of grinding and filling and sanding on the upside down hull, and then endless layers of primer and fairing before it was ready for paint. There's a magazine called Fine Woodworking but I don't remember hearing about Better Bondo. My

### Is Fiberglass Goingto be the Holy Grail?

By Boyd Mefferd

hunch is that comparing process with process, restoring a wood boat has a lot more appeal as a fun hobby activity than fixing the blisters in an old fiberglass hull. Many people believe that because the era of fiberglass followed the era of wood, younger people will be more excited by restoring glass. This idea doesn't make good sense to me.

Certainly in the 27 years I've been selling and restoring boats I've seen drastic changes in the supply of wooden runabouts. Obviously a finite number were built and every one found and restored is one less out there to be done. I can't remember how many times I've said or written that exact sentence. It makes sense that boaters who cannot find the wooden boat of their dreams might look at fiberglass, but even if I was going to start to deal in vintage glass I don't see many boats of interest available. Admitting my ignorance, I've consulted the Marque Club Directory that the ACBS published last April and find that there is, in fact, a Glasspar G-3 owners club that has been around for 18 years and has 300 owners registered, which is pretty impressive. The only other marque club for glass boats is the Lake 'N Sea Owners Association, founded just last year. The other 23 clubs listed in the directory all concentrate primarily on wooden boats. Whether this indicates that glass restoration is just getting started or reveals a general light level of interest remains to be seen, I guess.

Old age is probably the greatest threat

to the continued health of the ACBS, as it is to car clubs as well. One local car club in the Hartford, Connecticut, area has welcomed brand new cars, mostly modified imports, the "rice burners," in an effort to find younger blood. The closest comparison that I know of in the boat world was a 1987 23' Supra that came to the BSW show last summer. Several judges balked at scoring it at all, but after we heard the owner's story about getting the new boat as a 40th birthday present from his wife and kids (now he's celebrating his 60th) we lightened up and treated him with dignity and a second place trophy! It did, for a moment however, remind me of the old days at the Candlewood Inn (where the Southern New England show was held in the late '80s) where some of the previous night's bar customers would be too drunk to find their boats and just leave them there for our dock committee to deal with the morning of the show. It was a nice, well-maintained Supra, but it just didn't seem to fit in.

I've often wondered how many times George Johnson (1924-2007, the father of the hobby) had sold a particular boat that just seemed to keep coming back to him. My record is now having sold the same boat five times. Antique boaters do eventually become antiques themselves and when boating on their own becomes too difficult boats often are sold to people who are excited about the chance to own them and want to participate in club activities. People may pass on, but boats pass along and personally I see the boats themselves as the key to the continuation of the ACBS. I wouldn't certainly turn away people, even the 1987 Supra owner, who want to participate, but I don't think that a big push to sign up fiberglass boats is necessary. Glass may add some variety but I don't see it as the Holy Grail and I still see beautiful wooden boats as the main focus.

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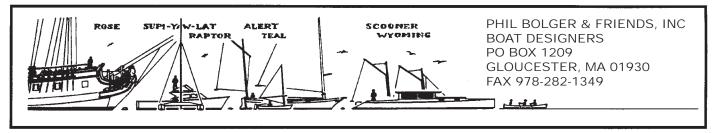
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The *Rose* project began for me in January 1969 with a telephone call from John Millar asking whether I'd be interested in working with a Newport group to produce a ship. He followed up with a letter dated January 8 with some description of *Rose*, but which made it clear that the *Rose* was only one of several possibilities. "Possible alternatives to *Rose* could be *HMS Boreas*, 28 guns, a scaled down version, which was Nelson's ship in the West Indies 1784-7, and *HMS Boston*, 24 guns, which was the earliest plan of an American-built ship (1748), and *HMS Cyane*, 18 guns, captured by *Constitution* c. 1813. We prefer *Rose* for her connection with Newport."

These plans of the various ships were "Admiralty drafts" or derivations thereof. The Royal Navy kept outline reference drawings of all ships that came into their dockyards. These drafts were intended to record the hull forms for future study. They were not building plans, omitting the lofting offsets, with minimal construction detail, and, in the case of *Rose*, no spar plan beyond indicating the location of her mast steps. No modern shipyard could build from these plans as they stood. On "my" *Rose* it took about 1,500 given dimensions to define the hull shape to enable a builder to lay her down.

enable a builder to lay her down.

John went on: "One point I did not mention was that although the round shape may be undesirable from the point of view of windward ability (he meant the full-lined 18th century bow shape—PCB) it is most desirable so as to give maximum restaurant floor space on an overall length of around 115'." He had made it clear on the telephone that the restaurant was only half the plan, the other part being that they envisaged a seagoing ship that could operate as a cruise ship in the Caribbean in winter.

I responded on January 10 with a rambling 2,000-word letter discussing all aspects of the project as I saw it, also favoring using *Rose* as a model, "...she's a good-looking ship and plain enough to be a practicable proposition. If I understood you correctly this is not to be a scholarly replica, like Baker's design for the *Mayflower*, but as good a vessel as can be made that will look like the original when afloat, including as far as possible the appearance on deck and below decks.

"It has to be so if anything more is to be done with her than tie her to a wharf to look at, as, of course, by modern standards, especially those of the Coast Guard officers who will be passing on her in one way or another, none of these old vessels were seaworthy, the word now generally used to mean foolproof. Apart from legal complications I myself have no ambition to be the author of another incident like the foundering of the Albatross, the root cause of which was the vessel did not have freeboard appropriate to her weight, not that her center of gravity was too high, but that when she got knocked down hard, as can happen no matter how much stability a vessel has, she put too much of her deck, including some hatches, into the sea. Albatross was a

### **Bolger on Design**

### Messing About with the 24-Gun Frigate Representation *Rose*

Design #225 Rose

Specifications:
Length overall (incl bowsprit and spanker boom): 172'
Length over figurehead: 124'
Length on deck: 116'
Length waterline: 108'
Breadth overall: 30'
Draft: 12'
Designed displacement: 458 long tons/
1,025,920lbs

Sail area (approx): 13,000sf incl seven squaresails, eight staysails and one gaff spanker Height over main topgallant mast from waterline: 125'

steel brigantine on North Sea pilot boat lines, working as a sail training vessel, that in 1960 was knocked down, flooded through her open main hatch, and sank within 60 seconds.

"To get enough buoyancy to make sure this can't happen, we deck her completely at spar deck level, flush from bow to stern or with one or more small breaks as the *Rose* plan shows." The original *Rose* had most of her battery mounted on an open gun deck through the middle part of the ship with high bulwarks to protect the gun crews but no decking or galleries above the guns. Her watertight integrity for reserve stability purposes extended only up to the gun deck and was dangerously low by modern standards. She relied on expert and alert officers and crew to compensate for the deficiency.

I suggested for the first of several times that the new ship could be made lighter and shallower than the original since she would have no battery. The guns were probably "long nines," two meters or more long and weighing a ton each, and she had to carry their ammunition and other supplies for long periods to fulfill her primary function which was patrol and escort in distant waters. The lighter and shallower ship would have been cheaper to build and substantially less expensive to maintain in the "cruise ship" mode and still more so as a floating restaurant. I kept recurring to this in the first weeks of discussion but it was rejected on various grounds, among others a perceived need for a usable hold under an accommodation deck below the restaurant level. I acquiesced at a fairly early stage, only stipulating that I should "be free to deal with the underbody according to my own methods".

Early in February we met in Boston and discussed construction, among other things.

In correspondence John had raised the possibility of building her in steel but this was finally rejected in favor of more or less traditional wood construction using laminated frames and other out-of-period methods if the still-to-be-chosen builder considered it economical. I had pressed for selecting a builder before freezing the plans to allow adapting the design to whatever method the builder could work with most efficiently. We found ourselves in good rapport, though part of the conference was taken up with a plan, instead of or in addition to the *Rose* project, to bring the corvette *Constellation* from Baltimore.

We went round and round about the dispute over whether that ship was the 1797 frigate rebuilt or a totally new ship built in 1848. I favored the latter, following Howard Chapelle who had been my constant mentor for many years. We had to agree to disagree about the matter though I understand that Chap's view did eventually prevail.

I hurriedly got out a set of preliminary plans, including 1/4" to the foot scale outboard profile, inboard profile, and main and spar deck plans with some representative sections and a tentative spar plan. Though many minor changes were made later, these drawings practically defined the ship from then on. The drawing here is the preliminary body plan from that package and makes clear my intention to deviate from 18th century practice by changing from the short blunt bow and long and gently sloped afterbody of the period to a matched bow and stern with a steeper run aft and less steep bowlines forward. This involved a hollowing out of the forward frame shapes which no 18th century designer would have tolerated. The change followed the practice of a hundred years or so after the designing of the original Rose, to the present day, and unquestionably improved her performance. The alteration of the above-water shape was not very noticeable, a slight hollow in her forward waterline and a visible above-water bilge in her foremost frames.

I also smoothed up the sections since I was using present day fairing methods and wasn't constricted by the compass-controlled drafting of the 18th century. This alteration was slight and was done for drafting and lofting convenience. Had she been built with laminated frames there would also have been a small saving in fabricating the timbers.

John took these plans to England where he did not find much interest in the project, none whatever in Hull where he had thought there might be some enthusiasm for memorializing that city's shipbuilding past since the original *Rose* had been built there. In the meantime I had a approached Harvey Gamage in South Bristol, Maine, who was interested but had too much work on hand to offer delivery as soon as the Newport syndicate had in mind. John was in touch with Smith & Rhuland in Lunenburg, Nova Scotia, because he had been impressed by their work on the representation (very far from a replica!) of the *Bounty*. Rhuland had capacity, a reputa-



Rose enters Boston Harbor at 11 knots close-hauled after her maiden sail from Lunenburg.

tion for fast and sound work, and enthusiasm for the project. His preliminary estimate was well within the scope of the syndicate and the project went forward on the assumption that he would build the ship.

I proceeded with the working plans, in close touch with Fred Rhuland. He was pleased with the plans in general, the lofting offsets "worked out exceptionally well." His suggestion was that the ship use approximately the same construction as the fishing vessels he'd built on a similar scale, with sawn frames of "local hardwood" (actually rock maple) and all else of Douglas fir from British Columbia. He picked up a few features which would have increased costs in time to make alterations which had no adverse effect. I flew down to Lunenburg to confer with him only twice, partly because it was clear that he knew what he was doing and did not need the designer's intrusions, partly because I was at full stretch trying to keep the plans ahead of the ship (I well recalled, on a government project I had worked on as a junior draftsman, being sent down to the building site to see how a certain bulkhead had been built before designing it...) and partly because I was not in good\_health at the time.

The only mistake that happened in my absence was that the quarter galleries were built with less tumblehome than the plans called for, an error of aesthetic significance to

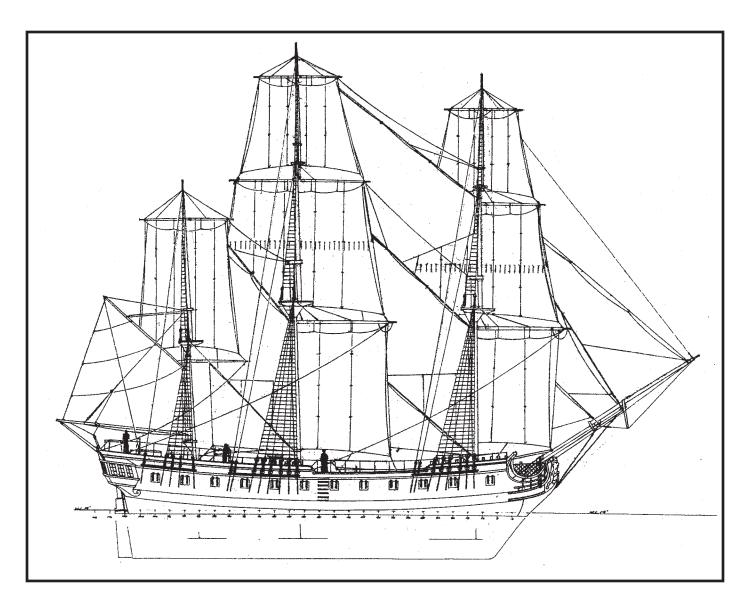
me only. A matter on which I wish I had taken a stronger stand was the deletion of steel hull strapping over the frames, a time-consuming feature to which Rhuland vehemently objected. If it had been done, and if the steel had lasted well (?), this would have prevented the flattening of her handsome sheer line over the years. I did insist on strapping the deck, which was easier to execute.

We just got away with the just-in-time plans delivery. There's a letter dated July 30, 1969, to Hood Sailmakers in Marblehead, Massachusetts, who were doing a superb job on her sails, "in working up the yokes, trusses, and brace angles I've found that the crossjack yard lands on the main topgallant backstay and must be shortened. The foot of the mizzen topsail, given as 33', should be short-ened by 3' to 30'." There's also a comment that proved to be prophetic in a letter of June 30 about which if any, of the designed sails could be dispensed with initially to save expense: \*"The main topgallant staysail would be the next thing to eliminate if you're retrenching as, while it will be a very effective sail indeed, it is certainly going to take the topgallant mast over the side sooner or later." (More on this later).

I had suggested early on that a time-lapse film of the assembly of the ship would be an attractive public relations device. Both Millar and Rhuland reacted with enthusiasm. But it did not come to us soon enough that we should have contacted Disney about it as it turned out to be tricky, with inexperienced efforts not at all satisfactory. We had envisaged a pleasant rippling effect as the successive frames were set up but the timing proved beyond the skill available on the spot. Also, the ship filled the building shed so completely that it was impossible to get a convincing angle of view.

As the ship took form there was discussion of peripheral matters such as paint schemes, details of layout, and this and that. For instance, when the matter of anchors came up, I unearthed in a Chapelle book an anchor inventory of USS Argus, "smaller and two-masted at that, and what she had was three ironstock anchors 1,700lbs each (!) plus one 640lbs and one 336lbs. Makes you think, doesn't it?" (my note about it concluded). I designed a fabricated anchor supposed to resemble one in-period but in the end Rhuland found a couple of stock anchors from a defunct banks fishing schooner, probably grossly inadequate but good enough as a stopgap. I designed, and Rhuland's small boat shop built, a 28' pinnace and a 16' yawlboat to be carried on deck, both of these were arranged to optionally carry sizable outboard motors in the fond hope that they would be some use in docking the ship.

There was some argument about the deadwood which I had tried to reduce on



grounds that its shrinking and swelling was an unnecessary stress on the structure. Rhuland resisted successfully on this, keeping to his standard arrangement.

Meanwhile I was sweating out the leads for hundreds of pieces of standing and running rigging derived from various precedents and checked by Erik A.R. Ronnberg, sometime mate of the four-masted bark Abraham Rydberg. Erik A.R. Ronnberg, Jr, then just starting his career as a world-class historical model maker and writer. was immensely helpful by suggesting sources and critiquing the design in general. (He, Rhuland, and I later got up a proposal for the Pride of Baltimore project which was not considered because we could not arrange building in Baltimore, and would probably have been rejected in the end because we again would have insisted on out-of-period proportions to give the design an acceptable range of stability. Some lives would have been saved if this consideration had had more serious attention in that vessel as actually built.)

A railroad accident delayed delivery of the spar stock just enough for me to get some corrections specified before any wood was cut. For instance, the spritsail had been deleted and the spritsail yard reduced to what was needed as a spreader for the jib boom guys. Millar pointed out that the designed dolphin striker and martingale (a strut and stay holding the end of the jib boom against the tension of the foretopgallant stay) were out of period and they were replaced by a somewhat less advantageous lead to the cutwater. In the same spirit of authentic appearance there were no spreaders on the 176' main top gallant backstays The wood shell blocks were made in Lunenburg.

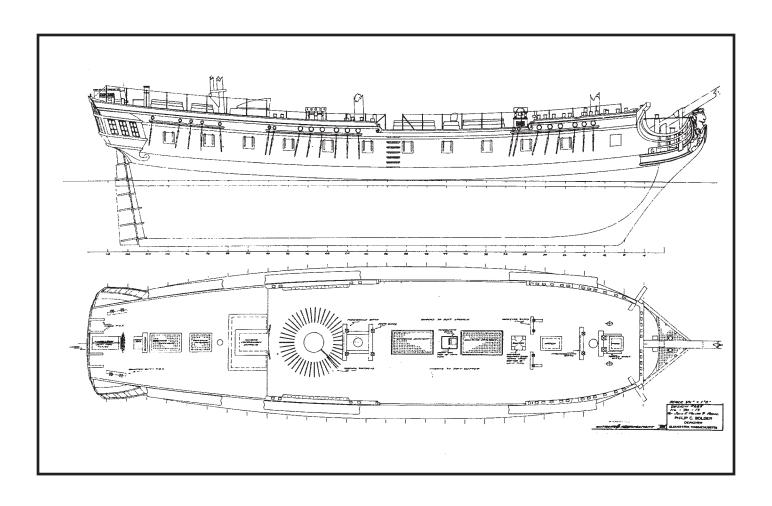
The launching was a gala affair with high provincial officials present and John Millar resplendent in an 18th century lieutenant's uniform. A (probably illegal but very beautiful) royal standard was displayed among other colors. I was prowling the ship, having authorized launching her unballasted and now worried about a strong wind right on the beam. I suggested that it would be prudent to keep the gunports closed and Rhuland agreed. I got down alongside the ways for a good view of her behavior as she took the water, but she proved amply stiff in the event.

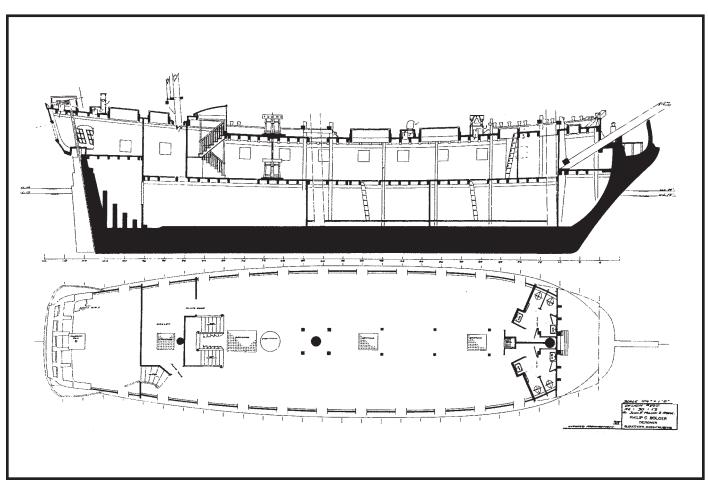
I meant, and was invited, to sail over to Boston in her on what was her first serious trial under sail, but for the time being I was too run down to face it and missed an exciting episode. She arrived off President Roads in a brisk and squally northwest wind, having outsailed the motorship supposed to tow her, and proceeded to beat up into Boston Harbor, logging 11 knots close-hauled with little stern wave (vindicating my shortening of her run) and tacking without difficulty.

There was some hitch in the gear that prevented bracing the course yards to the intended limit, and too few in her crew to see properly to the topgallant yards so she looks a little haywire in the photos, but her speed and handiness in light flotation and with no propellers to drag was impressive and startled some yachts that attempted to escort her in. But the new rigging was stretching visibly and the state of her upper spars looked more and more precarious with each tack, especially as she continued to carry the big main top gallant staysail I mentioned above and which I had warned about several times. At last there was a sharp squall, she heeled quite a lot, perhaps 15 degrees or more, and the main top gallant mast broke about three feet above the cap of the topmast.

I went aboard when they got her alongside and the gear more or less secured and found the skipper taking out his embarrassment by condemning my staying arrangements and sizing of the spars. "You hop up there and look at it,"\* said he. I have acrophobic tendencies and I've seldom done anything as hard as that climb, though it's actually less than 90'. The mast had gone at a knot in the grain but I don't think it had a chance in any case with that sail set and the backstay ineffective from stretch. The basic idea is that it's a fail-safe.

I read through the journal of Captain Cook's three-year world cruise in the Reso-





lution with attention to this. He had seven breakages of top gallant masts in that time, each treated as a very minor incident, with broken masts replaced at sea within a day or two. My sympathies were with the skipper, who was trying to put on a decent show and almost got away with it until that last little squall. And after all, not much harm done due to the forgiving qualities of this rig.

Later that summer I had a pleasant sail in her off Newport with everything in good order and working well, at least in the light airs which were all we got. She was not well-found for going to sea, with minimal gear and much makeshift work noticeable. As she returned up the bay she exchanged black powder salutes (dense clouds of white smoke) with the schooner Shenandoah, looking noble indeed. I think she was not under sail again for a long time as the syndicate proved to be badly undercapitalized and moreover was embroiled in a lawsuit with the builder who had hugely underestimated the cost of the ship and was trying to recoup with a long list of extras over the contract price.



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Rose went through various vicissitudes, gradually running down in condition, and was finally sold in 1988 to a foundation in Bridgeport, Connecticut, which did an elaborate rebuild, putting her for the first time in genuinely seaworthy condition. I supplied prints of the original plans, including the intended location for engines and prop shafts, requesting that I be kept informed about what was done and given prints of any plans produced. This request was not honored. In fact. there was a policy of minimizing her differences from the Revolutionary ship, apparently including flat statements in some of their material that she had been built to the original Admiralty plans. I was not consulted beyond requests for many sets of plan prints and not invited to look at her.

One day I noticed that she was in Gloucester Harbor and went alongside in my utility and asked permission to board. That was granted but there was no one aboard who knew my name and I was not encouraged to go below or aft. In a private letter Captain Bailey asserted that my plans were practically copies of the Admiralty draft but also that changes I had made caused her to pound when close-hauled in a seaway. I believe he did justice to her good qualities when he took her on a transatlantic round trip.

The next connection with *Rose* came when a representative of a Manhattan Beach, California, production company called at our office requesting a set of plans of *Rose* to use in converting her to play the part of *HMS Surprise* in the 2003 20th Century Fox film, *Master and Commander*, based on Patrick O'Brian's work. *Rose* happened to be the only vessel afloat and able that would come close to the vessel type in authenticity required for the period in question.

We named a nominal (ie, modest) price and eventually were confronted with a highly legal document which struck us as authorizing them to do anything with the plans and prohibiting us from any influence on what was done while yet taking responsibility for any and all outcomes of their proceedings, a hair-raising proposal and, I gather, an approach to leave them free to proceed without

any reference to my work and my rights. We obviously could not sign this and thus had no more to do with the film. It was quite well done although I thought they missed a bet by not sailing the ship more and harder as opposed to studio and computer fakery. At least we do not see much propeller wash from her twin-screw propulsion.

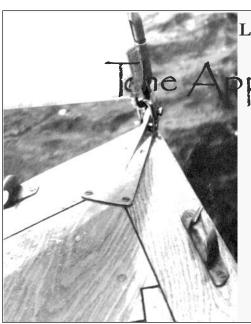
In lieu of a complete set of my plans, and thus her hull-lines, they instead invested in very expensive and lengthy laser-scanning of *Rose* in a drydock. With her scantlings ready at hand right then and there they then proceeded to reconstruct "modern" plans. With these copies based on my *Rose* they proceeded to build a complete second hull for the tank stage set in Baja, Mexico, where various in-the-water scenes were shot, with the hull manipulated by a system of submersed hydraulics rams to heel, pitch, or nearly sink her. A third hull was partially assembled for interior shots.

Of course, they all had to match each other to avoid jarring discrepancies and the detailing went quite far to be as authentic as possible, all more or less based on *Rose*, her hull, deck layout, sail plan, etc. In their "Collector's Edition" package of material on the movie it is stated under "Behind the Scenes" that for the tank stage set "the *HMS Surprise* was built using authentic plans found in the National Maritime Museum in London." Elsewhere the vessel used is referred to as "the *Rose*, a 20th century replica of an 1800s era British Royal Navy ship, formerly America's largest sailing school vessel." Out of the \$135 million budget no royalties were paid us.

It's a point worth mentioning that what sent John Millar to me was a cover story in *Popular Boating* about a 16' rowboat I had designed for my own use. It was an elaborated Whitehall boat with a strong period flavor. I had taken a lot of pains with the modeling and details, including a gilded stem ornament. This boat indulged an impulse to design and own a "gold-plater," no expense spared, just once. I'm glad that one of its satisfactions was that it opened the opportunity to design a big square-rigger, again just once, and indulge a life-long academic interest in the implications of nautical history. I did not seek or accept any more commissions of this type, being even more interested in the future than the past. As Rose began her sailing career I was designing the fast aluminum diesel cruiser Berserkr for an Icelandic client and sailing my experimental leeboard sharpie Pointer.

Today *Rose*, in her appearance as *HMS Surprise*, is being maintained and periodically sailed by the San Diego Maritime Museum. Should there ever be a sequel to the movie she would be ready to serve as the lead actress some 40 years after I designed her.

As a footnote, Susanne speculates that in light of global piracy of films such as Master and Commander, my design #225, Rose, may well be one of the most widely featured designs of any design house with legitimate and unauthorized copies in circulation from your local video rental, street vendors in Shanghai, in all the back alleys of Kandahar, or, for all I know, Osama Bin Laden's hideout. In light of the overall "business" approach by the producers mentioned above, I am not surprised to not see any reference to the designer of the key element in the movie. But in the concluding frames they do refer to the ship used in the movie as the *Rose*, and that will have to do.



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When I lost my small boat's outboard rudder after an encounter with a lobster pot buoy, I vowed I would not replace it with the fragile, cost-reduced product my boat builder offered. I decided instead to design and build a sturdier kickup model myself.

Because the season ended two days after the loss of the rudder, I had no time to build a new one before leaving for home 500 miles away. I was able, however, to purchase a pair of heavy bronze pintles similar to the ones I had lost and locate them on a simulated rudder made from a piece of scrap plywood so that they fitted the gudgeons I still had on my boat. With other necessary dimensions I had enough information to proceed.

Back home I made a scale drawing of my new rudder, deriving the basic shape from memory and the sales literature of a similar boat. For material I decided upon 1" thick oak which would be slotted to take a 3/46" thick aluminum plate, a 1"x3" piece of oak for the tiller, and the necessary brass hardware.

I determined not to scrimp on the length or width of the aluminum rudder blade in order to insure having full control of the boat under all sailing conditions, but I did design the blade so that it would hit bottom only after the heavier centerboard did.

Procuring the proper materials was a problem. I had trouble finding a metals distributor who sold the size aluminum plate I needed and I had to wait more than two months to get the 1"x12"x21" piece of oak I had ordered for the rudder stock. It is a good idea to order your material as soon as you firm up the design in order to avoid delays.

I had only a handsaw to cut the ¼" slot in the center of the rough oak stock to house the rudder blade. Not having the use of a power saw had an advantage, however, since it forced me to work slowly and do the job right.

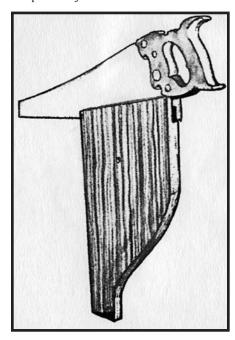
me to work slowly and do the job right.

First I measured out "A" on each side of the centerline of the slot to establish a cutting line for the saw. Then, protecting the surface of the wood with a piece of cloth, I set the 1" thick oak in a vise and began to cut

## Making a Kickup Rudder

By Lionel Taylor

along the inside of the scribed lines. In order that the kickup blade could be elevated to a horizontal position in case of a grounding or when launching in shallow water, I had to cut the slot 2" longer on the trailing edge of the rudder stock than on the leading edge. It was slow, hot work and it took several evenings to complete the job.



Because I could find no hardware store that sold an 8" long 3%" wide chisel to remove the wood from the center of the cut, I fashioned

a chisel out of a 3/16" screwdriver. After sharpening the tip with a file, I found the makeshift tool more than adequate for the job.

I could not buy the aluminum for the rudder blade trimmed to size but it was a simple matter to round the corners with a hacksaw blade.

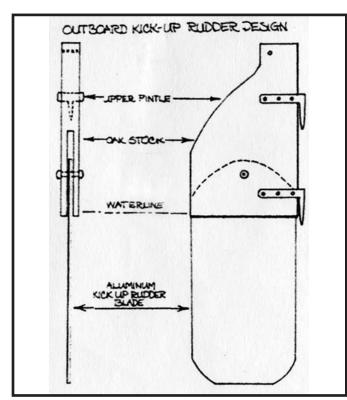
I had to drill two trial mounting holes in the rudder stock before finding the right one to suspend the blade at the designed angle. I used a nail instead of a bolt while experimenting with the blade location, thereby keeping the holes in the rudder stock small. I could then fill them in later with plastic wood. The correct holes were enlarged to accept a ½" through-bolt. The fit between the rudder stock and blade was perfect.

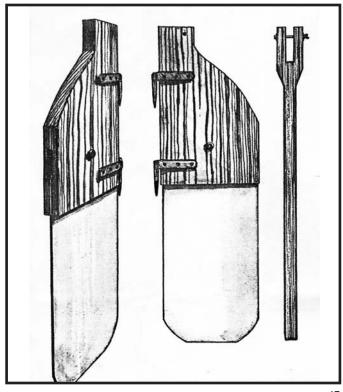
I used screws for securing the lower pintle so that the rudder blade could move freely in the stock. The upper pintle was bolted into position using the dimensions from the simulated rudder.

I slotted the after end of the tiller so that it bolted through the rudder stock. Sitting in the bottom of the boat, I could then raise it over my head when coming about. I also made it wide enough so I could add a tiller extension later.

To avoid losing the new rudder as I had the old one, I drilled a hole for a cotter pin in the upper pintle where it fitted into the gudgeon. So far no underwater obstruction has been able to dislodge the rudder.

In order to get several coats of wood sealer and marine varnish into the ½" wide blade slot, I devised a special applicator to which I had tacked a piece of chamois cloth. Working the applicator back and forth in the wood slot I was able to apply varnish even to the most inaccessible areas. After applying four or five coats of varnish to the outer surfaces of the rudder and tiller I was off to my boat in the spring to see if my calculations and design had worked. The rudder fitted and performed perfectly the first time.





On March 30 a group of canoeists met at Lou Mutschler's shop in Lincoln, Massachusetts, to stretch the canvas on the OTCA that Lou has been working on over the winter. The OTCA is a 1958 16-footer that belongs to Jay Crawford of Philadelphia, Pennsylvania, and Lake Winnipesaukee, New Hampshire. Jay and Lou go back a long way, they were classmates in the second grade! I haven't done the math but that is a lot of years and it was a treat for me to see how these two have maintained a friendship this long even with a lot of miles between them.

Jay has owned the OTCA for many years, for most of this time it has been hanging in his cabin on Lake Winnipesaukee, unusable due to broken wood and rotted canvas. A casual remark to Lou resulted in the OTCA coming down to Lincoln last fall for a complete re-hab here in Lou's shop. Over the winter Lou had replaced a couple of ribs and some planking. He had made new seat frames and a new keel and is now making a new set of outwales for this vintage Old Town. The inwales required new wood to be scarphed in at the tips and one stem tip needed to be repaired.

When the basic woodworking repairs were completed Lou put out the call for volunteers to join him for a day of canvassing



Jay and Lou looking over the OTCA.

### OTCA Canvassing Party

By Steve Lapey Photos by Tom Ballantyne and Jay Crawford

and filling. Owner Jay drove up from Philly for the event, Lou's daughter Deb came from Medford, and I came from Groveland. Tom Ballantyne came to help from the other side of Lincoln, rounding out the crew of canvas stretchers. Of course, to get all this labor Lou had to promise something in return, so we all started the day with one of his famous flapjack breakfasts. When it was time to start working we were all well nourished and ready to go.

Out in the shop the OTCA was ready for its new skin so we unrolled the #10 duck, hooked up the come-a-long, and started the stretching operation. As we have done before at Lou's, we did it with the hull upside down on two sturdy sawhorses with the stretching apparatus connected to the concrete floor at each end.

Once the canvas was properly stretched it was time to staple it along the gunwales. For this we used stainless steel staples, %6" long, driving them in with the usual Arrow T-50 staple gun. To assist in the final stretching we used the specially modified ViceGrip sheet metal pliers that Bill Clements has developed. The extra hardwood block attached to one of the jaws of the pliers makes it an easy task to pull the canvas and hold it for the stapling.

To me, the highlight of the day was that Lou was able to pass along these skills to his daughter Deb who was eager and willing to get "hands on" with this project. With a little instruction from her dad she was soon stretching and stapling like a pro. It is so important that we all strive to teach the next generation these canoe building skills and to encourage the preservation of these wonderful old canoes.

With a two person team of stretchers and staplers on each side of the hull the job was done in record time. After the ends were finished off using  $\frac{5}{16}$ " brass tacks at the stems, it was lunch time. Once again Lou pulled out all the stops and served up a generous serving of corn chowder, another of his specialties.

For filling the OTCA Lou had chosen Bill Clements' traditional oil-based filler, one gallon of the filler will be plenty for this 16-footer. The first step is always to completely mix the filler because the silica that is in it tends to settle in a big clump at the bottom of the can. I have found that the best way to mix this is with an electric drill with a mixing paddle. Usually when you try using this device a good portion of the expensive filler ends up on the shop floor, making a big mess. To solve this problem we used a plastic pouring attachment that snaps into the top of the gallon can to increase the capacity of the container and then placed a plywood disc over it to contain all the filler. This seemed to work well and the filler was mixed in just a few minutes.

With our team approach still working we had the first two coats of filler on and rubbed within an hour. Soon some of the helpers had to depart for other obligations, leaving Lou and myself to rub in the final coat of filler. I know it is contrary to the standard instructions but I have discovered that if you put two coats of the filler on and then let it set up for an hour or more the third coat goes on easier and better. Rubbing the third coat with bare hands (not to worry, the filler washes off easily with plain old soap and water) creates a super smooth surface that will require less sanding after it has cured for four or five weeks. I discovered



Tom and Lou setting up one of the canvas clamps.

Steve and Lou give the hull a final inspection prior to the canvassing.



Spreading the canvas over the hull.



this one day when I ran out of filler in the middle of a filling job and I had to make an emergency trip for more filler.

With all the good help we were all cleaned up and had the tools put away before 3:00. Now Lou can spend a few weeks caning the new seat frames that he has made and preparing the new outwales that this OTCA deserves. This classic wooden canoe will be making its return to the water early this summer back in Lake Winnipesaukee.



Canvassing complete, now it is time for the filler.

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Lou instructing Deb in the canvas stretching process.

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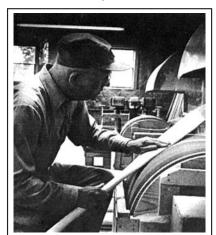
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### **Dumb Sheaves** and Blocks Not So Dumb

By Irwin Schuster

A few months back Mr Bolger was saying that perhaps he had gone too far, early on, with dumb sheaves. I guess you can, but if a dumb one works, why go further and add a moving part where none is needed? There are way too many potential failure points in rigging already.

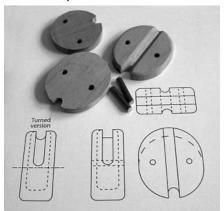
I remember almost nothing from "Mech" courses but a few simple formulae. One is that friction equals the coefficient of friction x normal force, slipperyness x weight, or pressure on the surface in question. If the normal force is low, the friction is low and you don't need a roller.

Even if this has been remembered wrongly or doesn't apply, I have been design-



Foreside of masthead with dumb main halyard sheave and above that, the dowel jib sheave.

Dumb block parts.



ing and building a little sailing skiff and trying to avoid purchased hardware, particularly of marine specification, and decided to go dumb (not a big stretch). Both halyards and the sheet block are blissfully ignorant and, while the main is a little hard to hoist, that drag may not be entirely the fault of the dumb sheave. The others work easily.

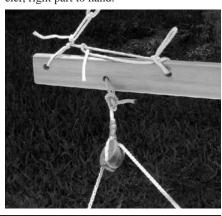
The solid state halyard sheaves are obvious but I think the block is worth looking at. Mine is 1.5" in diameter and cheeks are 1.75" long, 0.25" cherry. I did it like so, cut the circular part with a hole saw. Next cut the cheeks as rectangles, clamp them together, and drill between them to form a groove for the rope eye. Stack the three parts and drill for the brass rod pins. Rough shape the cheeks with a band saw and dry assemble. Then do the shaping on a disk sander and round over with whatever. TiteBond III holds the parts. A little work with a round rasp finishes the wood part. A tight eye splice covered by a seizing to hide my unsightly splicing workmanship finished the job.

You could do a fancy, off-center turning to make the block from one piece but drilling for the half grooves tilted that decision for me and the brass adds a boaty touch.



Pinned and assembled block with seized eye splice.

Block rigged on boom, left part to rope traveler, right part to hand.









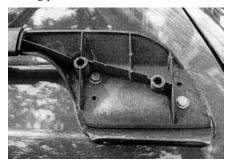
Well, the old Volvo finally changed from sturdy transportation to a restoration project and was sent to the knackers. Sarah and I chased large station wagons for a month, only to have each prospect snapped up before we could move. When we finally found a nearby Camry wagon on eBay, we went to the dealership and bought it without waiting for the bid process.

There was just one problem, it was bald. Now the Volvo had not been equipped with a roof rack that inspired much confidence, it had apparently been intended to contain suitcases and wasn't up to holding a dinghy or even a mast, but it HAD been built of stainless tubing and "white metal" castings. For our real carrying I'd used a heavy duty rack that I could have stood on. I'd made it with cast aluminum clamp-on fittings, which fitted on the sturdy drip rails.

But the Toyota's problem wasn't just its baldness, worse than that. It, like almost all modern cars, had no drip rails. We investigated aftermarket racks but they clamped onto the door frame and there was no way to use such racks at the back of the roof. This would have meant that the two bars would be separated by a maximum of 4', meaning huge overhangs for anything I was likely to be carrying (18' spars or the 12' dinghy). I toyed with schemes to screw aluminum extrusions to the roof and clamp my earlier racks in place, but I wasn't happy either with the esthetics or with the rust potential.

We decided to look around for a junker rack from the same model. We found one nearby and it was cheap! We went down to the yard to strip it and discovered that the end castings were plastic. We went ahead and bought it, at \$35 it was one-eighth the cost of the aftermarket options. It certainly wouldn't stand up to holding a dinghy though.

Figure 1: The "guts" of the roof rack: "Engineering plastic."



### **Bald Headed Toyota**

By Mark Fisher

We needed some way of beefing up the ends, or using our heavy duty bars. Sarah thought of adding an aluminum plate bent to match a drip edge under each end fitting of the stock rack. We traced the "footprint" of each corner of the rack and positioned the holes to line up with the fastening screws. A plate of 3/32" aluminum was cut to each shape and drilled to match the fastener holes on the rack ends. The part that would lie under the corner was then shaped would lie smoothly on the curve of the roof, while an extended lip was bent to match the contour of a rain gutter.

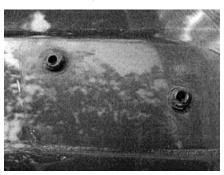
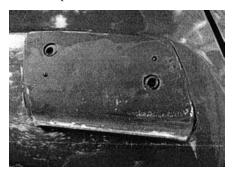


Figure 2: The foundation: Well nuts in sealed holes.

Figure 3: The "meat" in the sandwich: An aluminum plate drilled to clear the well nuts.



Since we were adding the rack to a bald roof, I had to drill the roof. The rack was carefully centered and the hole locations were marked. I drilled the holes, then used a passivation wash and zinc primer to retard corrosion. The mounting screws would be seated in well nuts whose neoprene bodies would both seal the holes and provide clear threads for the machine screws.

Once formed, the plates were painted black to match the rack. The rack was installed on the car on top of the aluminum plates. In place they were almost invisible. The cargo bars were re-sized to fit the new car's width and clamped in place. The result was an installation tough enough to carry our dinghy, *Feather*, or anything else that would span the admittedly long gap between the front and rear bars.

Figure 4: The bar clamped in place.





I built a canoe in 1987 that I named *Tern*. At the time I designed and built this boat I was into canoe racing and I spent most of my canoeing time in racier boats. As I aged my enthusiasm for racing cooled and I began paddling the *Tern* more. I have built about 40 boats of all types since building the *Tern*, but for some reason most of my boating in recent year has been in her. It has become my favorite boat. I even built a *Tern 2* with a little more rocker and a touch of tumblehome but still the old *Tern* won out.

If boats could vote the *Tern* would qualify, it has passed that 21 year age. The boat has nearly a million miles, a lot of hard knocks, and was showing the wear. Over the last couple summers I kept looking at the weather-beaten *Tern*, thinking about a restoration. This winter the boat was getting a face lift. She was badly sunburned and had more patches in the bottom than I would like to admit to. She really needed a new skin and that is a big job.

Getting fiberglass off a cedar hull is work, it would probably have been easier to have just built a new boat. But I was committed to this restoration knowing what work was involved. I had done a couple of restorations when I worked at Northwest Canoe so I knew what I was in for. I got started removing all the fiberglass from the outside of the hull. I only did the outside as the interior fiberglass was needed to hold things together while I was doing the work. On a thicker hull I might have used a Skilsaw and scored the bottom but the *Tern* has less than ½" of cedar in the hull so I really wanted to be gentle with this wooden hull.

So how do I remove old fiberglass? I used a heat gun, a putty knife, and a pair of pliers. I needed to have a lot of patience. I find a spot where I can loosen an edge, then start heating. The epoxy will soften with enough heat so the glass can be pulled loose from the wood. I was able to pull off strips of old fiberglass a couple of inches wide and with luck I might get 6" off before the glass tore and I had to get hold of a new edge.

Altogether I probably spent a full day removing the old glass off the hull. This work was spread out over a couple of weeks. Now the glass was off but there was still a lot of epoxy on the wood. This epoxy is textured like the underside of the glass that I removed. I tried sanding this off and gave up on that in a big hurry. The stuff is really tough.

Peeling off glass with heat gun.

### In My Shop

### A Little Patina

By Mississippi Bob

I have a carbide scraper that was given to me by a good friend in Colorado. I put this tool to work along with the heat gun. I found that I could heat up a spot and scrape it clean while the epoxy was still soft. After a bit of practice I developed a pattern that got the maximum done for the work involved. This scraping took about another full day's work spread over a few more weeks All the work to this point was spread out through the winter, interrupted by a couple of trips to Mexico. Strip hulls are very fragile with glass on only one side so I left the outer gunwales on until all the scraping was done. They came off just before the sanding.

I finished the scraping job just in time for some real spring weather so the boat was moved outside for a good sanding. I have developed an allergy to cedar sawdust and I try to do as much sanding as I can outside. I used my Porter Cable random orbital sander for this job along with #60 grit paper. This is an aggressive tool and in less than two hours I was finishing it off with #80 grit. I had a 25mph south wind that day and the sanding dust contaminated the neighborhood but not my shop.

I wanted to leave a bit of patina on the boat so that no one would ever mistake it for a new boat. As I was sanding I intentionally left a few smudges here and there that gave the boat that old repaired boat look. Some of the old patch jobs in the bottom didn't want to sand out easily so they stayed, they are battle scars.

The spring weather was really welcome as I was able to heat my shop up to an honest 70 degrees. I heat my shop with a wood stove and sometimes I feel that I spend more time cutting up fuel than I do working.

On glassing day I got up early and lit a fire, then went in and fixed breakfast. After that I stoked up the fire, dusted off the hull, and spread the fabric over the hull. I next cut some bias strips of glass to cover the ends. There are many ways to apply fiberglass but my preferred method is to lay the dry cloth over the bare hull, then wet it out and let the resins soak through to the wood. I did the ends pieces first, then starting from the middle I spread resin over the entire hull, working first toward one end then toward the other. When I neared the ends I trimmed the glass about  $\frac{1}{2}$ " short of the ends. This left the glass long enough to cover the edges of the pieces that I had on the ends.

I stoked up the fire and went to lunch. After lunch I mixed another batch of epoxy and rolled on another layer of resin. I don't have the kind of control of my shop heater that Robb White talked about, and by the time this second layer was applied the shop was getting really warm, like 85 degrees. Bubbles were forming in places where gasses were being driven out of the wood, not perfect but I can live with that. I was just happy that it was warm enough for the epoxy to cure.

The next day things had hardened up quit well and I rolled the boat upright and began working on the decks. The *Tern* has wineglass transoms and strip decks about 3' long on each end. I was saving this for a separate operation as I chose not to make the boat any more fragile than need be. Time had come to strip the glass off the decks and re-glass them. This job went quite well as I was able to remove the glass in large sheets. I had the ends cleaned and re-glassed all in one day.

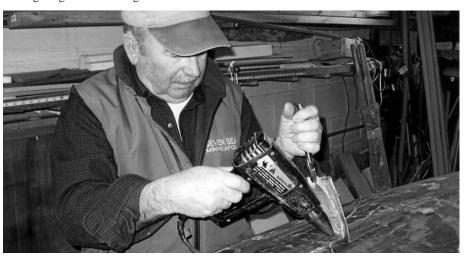
When everything was hard the boat went outdoors again for another sanding. I like to sand things thoroughly between the second and third coats of epoxy. The boat looked pretty good with this third coat of resin and it was time to take a look at the interior. The inside looked pretty grungy now that the outside was redone. Originally I left the inside slightly textured. The weave of the fabric makes a nice interior but after 20-some years it looked pretty bad.

I began thinking about ways to renew this surface and I hit on the idea of scrubbing the surface with a stiff scrub brush and acetone. I tested this idea, then held off on the inside. I built new outer rails and installed them. The rails were cut out of a 15' piece of mahogany molding. I find that I can cut 2" wide pieces from a base molding with a rounded scrap left over.

The entire exterior got another sanding and a couple coats of semi-gloss varnish. I chose not to use gloss as it makes all the blems stand out more. The new woodwork and the sanded old brightwork got several coats at the same time.

Time to do the interior. The old knee pads came out but the contact cement didn't. I sanded this glue with some #60 grit and only gummed up the paper. I smoothed these areas as good as I could and decider that the replacement kneeling pads will be about an inch bigger that the old ones. There are times when one must go with the flow.

I now had several coats of varnish on all the rails so the boat went outside again for a good scrubbing. I used warm soapy water and a fairly stiff scrub brush and cleaned up the interior as good as possible. When this surface was dry I really had my doubts, but I tested a spot with varnish and a clean looking surface appeared so the entire interior got one coat of varnish. Looks pretty good. After the varnish was dry I installed the new bungees on the thwarts. I had replacement logos made to replace the originals. With new kneeling pads and a new Minnesota license, I'm ready to hit the Minnesota lakes in high style.

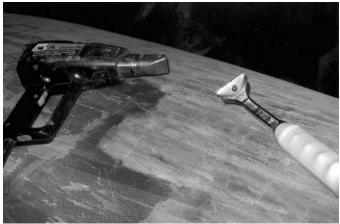


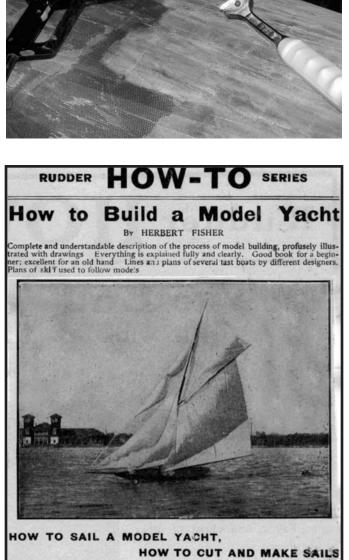


Residue left after glass came off.

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A simple jig that I made to help planing and sanding the 1" outer rails. Close-up of bow showing logos, patina, and a Minnesota license good until December 2010.

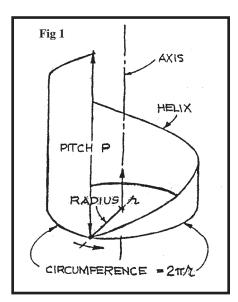




IMPLEST, safest and fastest boat that can be built. The working plans are such that a boy can build from them. The plans were published in 1898, and since then some poor boats have been built from them. The book has numerous illustrations of boats in and after construction, and also gives experience of builders in allparts of the world. Blue cloth and gold, uniform with "How to Build a Skipjack." PRICE, POSTPAID, \$1.00

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Most propellers are of a uniform and fixed pitch; that is, the pitch is not varied along the radius of the blade and is not changeable in operation. They are usually based on a helicoidal surface which forms the after face of the blades. A helicoidal surface is composed of a series of helicies. A helix may be thought to start out as the hypotenuse of a right triangle whose base is the circumference of a circle of radius r and whose altitude is the common pitch P (Fig 1). A series of helix-triangles with base-circumferences of radii varying from that of the propeller hub to that of the propeller itself, and



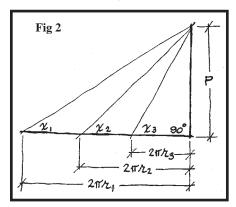
## How to Find the Pitch of a Propeller

By Philip Thiel, NA Sea / Land Designs, 4720 7th Ave NE Seattle WA 98105 US

all with the same altitude, are concentrically wrapped around the propeller axis and these helix-hypotenuses then collectively form the helicoidal surface. These helix-triangles are also shown in Fig 2 in which the pitch angles x are identified. From this it is seen that:

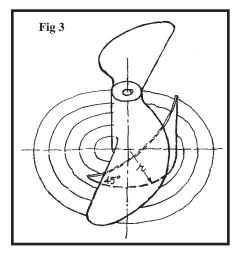
Tan x = P/2pi r and thus  $P = (2pi \ r)(tan \ x)$ . if x = 45 degrees, then  $tan \ x = 1$  and P = 2pi r. Thus:

- 1. Prepare a  $45^{\circ}$  triangle of a stiff, flexible material.
- 2. Position the propeller with the after (helical) surface facing a flat horizontal sur-



face, and centered on a series of concentric guidance circles.

- 3. Flexing the base of the 45° triangle parallel to the guidance circles, find the radius where the hypotenuse of the triangle best conforms to the underside of the propeller.
  - 4. Measure this radius r.
  - 5. Calculate P = 2pi r, or 6.28r.
- 6. If you cannot find a match with  $x = 45^{\circ}$  use a triangle with an angle that will conform at about mid-radius of the propeller and then calculate P = (2pi r) (tan x).
- 7. If the propeller is in place on the shaft it may be possible to remove the propeller nut, place a suitably scribed disc of plywood on the shaft behind the hub, replace the nut, and carry out the above procedure.





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I usually "skim" Messing About in Boats when it first arrives, then bag it up with other marine periodicals to be enjoyed at the cottage. At this point I am usually alone, no

phone, no TV, just me and the radio!

Years ago I wrote for MAIB about the use of a 50/50 mixture of boiled linseed oil and gum turpentine as an "old school" form of preservative for boats. As a carpenter, boat builder/restorer, I still rely on this older technology on many wood projects, both marine and on the farm. This is true, especially for wood projects that are exposed to the elements. For those of you who may not be familiar with this mixture, the old timers say "once a day for a week, once a week for a month, once a month for a year, and once a year there after."

I have lived in mid-coast Maine for almost 30 years, taught building trades, wood working, boat building, and repair. There are boat yards that I have had the good fortune to work in and a few I have had the misfortune to have worked in. More often than not I have worked on a per-diem rate or as a subcontractor. Not that it matters, but I am also a graduate of the Boat School in Eastport, Maine.

In a casual eastward migration that began in 1972 with stopovers in Cripple Creek, Colorado (teach high school), and in Round Rock, Texas (build houses), I landed in northeast Ohio for five years. Here I met (in addition to my future bride) an older gentleman by the name of Otto Fulst (aka "The Old Timer"). With me at 27 and Otto at 81, he became my mentor of all things important to a young man; women, whiskey, bee culture, Farmall F20s, black walnut, and tulip poplar. The Old Timer referred to the latter as "popal."

Otto and I traveled to Washington, West Virginia, and purchased an old Lane sawmill with a Frick mandrel that swung a 52" insert blade. A book could have been written on the frustration alone in trying to get that machine to cut a fair piece of hard wood. Even with hiring an Amish man from one of the surrounding communities, no cigar! His parting comment (as he put the check I just made out into his billfold) was, "you know, some of those damn mills just don't ever cut right."

We still cut a fair amount of oak and black walnut, we just had to plane it a little more than the other stuff. The truth is that mill seemed to love popal. It would pull through a 32" butt like a knife through butter and never wander a bit. It looked almost professional! Consequently, many projects were made with tulip poplar.

Those of you who have never seen a tulip poplar should make an effort to see one in bloom. Not only is it impressive as a specimen tree, but it has a serious presence in the forest or small stand it quite often towers over and sheds its lower limbs to show off its substantial girth. It is truly sad to witness these trees being shrugged off as "trash" and be so under-utilized where they grow so well.

Back in the '70s into the mid '80s in Maine sharp tooth poplar (aspen) was utilized by oxen drivers to line stanchion (stall) beds as it was easy on oxen hooves but still tough enough that it only had to be replaced every two or three years, A freshly sawn piece of this wood is easily broken, but once dried a tougher utility wood would be difficult to find. (A 1200lb oxen will carve up a concrete stall floor in as little as two years.) Now that this way of life has all but disappeared in Maine, these trees are considered as trash as well. Sad indeed!

### The Case for Tulip Poplar

By Ted Andrei

A freshly sawn piece of tulip poplar is, in fact, a weak, inferior piece of wood. But once dried it machines well, is quite sturdy, holds fasteners aggressively, and accepts all types of finishes. It probably isn't the best candidate for stain with a glossy finish, but it is a suitable wood for boat building.

I have an old 4'x6' work table with oak drawers and cherry fronts, the basic bench is all 2"x popal. All were constructed from wood off that old Lane mill. The oak and the cherry do interesting things as the seasons change and the years go by, but the popal is as straight as the day Otto and I cut it over 35 years ago.

The growing conditions for tulip poplar must require immense heat and stifling humidity as I have never seen one growing in mid-coast Maine, although they supposedly are able to exist here.

The Old Timer and I cut one popal in an area that he said was total pasture when he was a "young fella." This tree was 33" at the butt, first limb at 24', and had 42 countable growth rings. I did ask Otto, "Exactly how young of a fella were you, since this tree is only 42 years?" I don't speak German so I never did get a straight answer to that one.

The growing conditions in that area also grew white oak as big around as 50gal drums with poison ivy as thick as a child's wrist reaching up into the canopy. I had one clump of black American cherry where my new house was soon to be. They were enormous and grew like a clump of white birch. Each one was at least (total of five) 26" at the butt. Now, that's something you do not see in Maine! Maybe I'll tell you sometime how all of those beautiful cherry trees got turned into firewood.

The article I referred to earlier (50/50 preservative) has a place here as well. The abovementioned popal tree provided the frames for a small (62") boat that is treated exclusively with 50/50. 1 still use this boat, but sadly not as much as I would like.

This brings me to Robb White's comments on the withdrawal of his piece from WoodenBoat re: "the virtues of Liriodendron tulipfera." Remember now, I'm way behind on my reading but if some of you older gentlemen have a memory similar to mine, the good news is this will all be new to you.

Just prior to moving to Maine (at this time I was now married) I was building a house in Ohio. I had 47 acres, a sawmill that could not cut straight, an 85-year-old helper, and an abundance of oak, cherry, and tulip poplar, no spruce, no pine. For the purpose of obtaining a building permit from the county I had to hire an engineer to "sign off" on the permit stating that oak (rough cut, full 2"xs) was, in fact, a reasonable substitute for spruce as a framing material.

I'm not looking to beat anyone up here and I won't comment on the intellect of the folks who had concern that oak may not be as strong as spruce as a framing material because it wouldn't do any good. But why, in the name of sanity, do we put people with little or no common sense in charge of making supposed reasonable decisions for the rest of us? It makes no sense to me.

Twenty years ago my sweetie and I planted 5000 Japanese/European hybrid larch (tamarack) to be used on boat projects and other future building projects on the farm. Some of these have now reached useful size. I just hope we don't get a letter from some Augusta bureaucrat telling us we can no longer use tamarack for anything in Maine.

Boating, its related industries, and quite often (not always) its supporting cast of magazines, boat schools, and professional organizations continues riding on the historic coattails of elitism that the early yachting community put into place. Over the years I have witnessed this "creep" into some of the larger boat yards, affecting the trades themselves.

One of the things I noticed working in a variety of boatyards in mainland Maine and on the islands was that the opinion of some on boat building and how things should be done in general is usually based proportionally on what you drive (Toyota PU or vintage Land Rover, BMW bike in nice weather), what you wear, (only one choice here, Carhart), and what tools you have in your possession. Equally as important, where were these tools purchased? The most likely intent being Marples, Japanese saws, trendy bronze planes, and all purchased from one of the high end catalogs. Or is that catalogues?

I have worked on projects with young men who have displayed a sense of smug humor at my Chevy S-10 (30mpg), "Sportsman's Guide" carpenter pants (two pair for \$20 on sale), and my handmade toolbox filled with old hand-me-down tools and homemade tools and jigs.

When doing a job these same individuals would spend half an hour sharpening their Marples chisel, only to retreat to their three tiered system of Japanese diamond encrusted hones in order to supplement the previous precision grind. In the meantime I have pulled out of the pocket of my cheap-ass pants a small, three-sided stone that rests right next to my Zippo lighter. A few smart strokes on what should have been a reasonably sharp tool to begin with and presto, the job is completed ten minutes before the boys show up, ready to hit it!

Now I mean no disrespect to these young craftsmen, but it does put somewhat of a fine point on the reason why I allowed my subscription to WoodenBoat to die of natural causes about 12 years ago, for months all they could argue back and forth over was the virtues of one angle vs another on their chisels. It's all posturing and I just do not have the patience for that. It's probably why I chose not to be a brain surgeon!

The passing of knowledge to the next generation is essential and I have had the pleasure of working with some of the finest young craftsmen in the business. Many of the young folks who are getting into boat building today seem to have an innate talent that took me many years to hone. They know the importance of listening, making jigs, and trying something because the "Old Timer" said, "now this is the way I was taught."

At any rate, to wrap this up, popal is good, not all state or county employees are experts, and some of those dam mills just don't ever cut right!

I actually was going to write more but I peeked into the boat magazine bag and spied the latest, virgin plastic wrapped, 4lb issue of Show Boats International. I wonder if they use popal or hack in any of their boats?

"The engine sputtered and quit!" Boating has a small margin for error. You go down your checklist and things can still go wrong. We have all heard stories about water being put in the fuel tank or fuel in the water tank by an inattentive marina employee. And we all try to keep an eye on what is being done while getting other things ready.

If possible, it might be a good idea to have one of those along with you assigned to watch the fueling operation once the boat is secured to the dock. That person makes sure that the proper fuel is selected and the proper fill connection is used by the person handling the fueling operation (if other than the member of the crew). If you are by yourself and the marina staff is handing the fueling, take the time to make sure that it is the right fuel, it is the right filler connection, and that the bill (gallons pumped) matches the reading on the pump meter. Mistakes can happen and you do not want to be a hour out from the marina when you find that the fuel tank is not full or the receipt does not match the gallons pumped.

Distractions can be a problem. Acquaintances who use checklists also do a verbal list. They read the checklist out loud as they do each item. Saying the step helps them to focus on what they are doing at the time. The effort also helps them to remember that they did the step so there is no "second guessing" later ("Did I put the plug in the stern?"). One time after rigging and launching our Tornado, I discovered that a hull was getting lower in the water. Looking over the stern I discov-



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### From the Lee Rail

By C. Henry Depew

ered that the drain plug had not been secured properly and the hull was taking on water. The foam flotation in the hull kept the boat from going to the bottom as I headed for the beach. I had been in a hurry to get things done and had not made sure that both drain plugs in the hulls were both inserted and secured.

Separation of responsibilities helps make sure things are done in the correct order and removes some of the distractions that seem to arise. When my wife and I were launching and recovering our Sisu 22 on weekends, we each did certain things in a certain order. There was also a verbal check-off between us as we went through the launch/recover procedure. That way we knew that all had been done and the boat was ready to be launched or recovered.

Safe and efficient boat operation means that you do not get overly focused on one thing. As the boat operator you are supposed to scan the instruments for changes (oil pressure drops, temperature rises), keep an eye on what is going on around you on the water (both near and far), be aware of what is going on elsewhere on/in the boat, and enjoy the ride. As crew/passenger you keep a watch on where you are putting your hands/feet, making sure the beverage container does not spill, while also keeping watch on what is going on around you and enjoying the ride.

All too often, when something goes wrong, everyone gets focused on the problem and ignores other factors. A friend had trouble with his outboard at the mouth of a river with a strong incoming tide and a number of oyster bars upstream. Those on board become so focused on the engine problem ("it will be a quick fix") that the boat was almost swept onto one of the bars before someone looked up, realized the potential danger, and put out the anchor.

The "what if this goes wrong" game has the associated priority criteria of problem importance and remedial action. Some things are obvious to those of us who go boating. If the engine temp climbs (or the alarm goes off) you shut down the engine to see what has fouled the cooling system. Likewise if the oil pressure drops. After shutting down the engine, someone on board puts out the anchor (with rode attached) to hold the boat. Then you see what the problem might be.

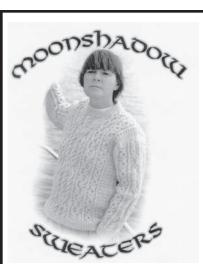
What is less obvious is the spilled beverage all over the new upholstery in the cockpit. The boat operator leaves the cleanup to others and continues to safely operate the boat. Letting go of the helm to help clean up is an invitation to a cascade of problems that can grow in relative danger to the boat and those onboard.

I went to help pick a person out of the water on a lake one day. Reportedly the sole person on board knocked over his beverage container, as he reached for the container the boat hit a wave and bounced, he was off balance and let go of the outboard tiller to catch himself, the outboard engine torque spun the bow of the boat to port, and he went over the stern to starboard. The propeller missed him and he was left in the water with a boat going in circles. All ended well with no one hurt but it was all caused by a spilled container and the operator not taking time to slow down the boat before retrieving the container.

One distraction that can lead to a frustrating weekend is when you forget to make sure that the key is out of the ignition switch and/or the master switch is turned off before you leave your boat. A dead battery is not a good thing when you want to go out on your boat the next weekend. The fixed base operator where I rent an airplane from time to time has the tail beacon light left on in the check list for shutting down the airplane. If the beacon is left on and the master switch is not turned off, the beacon is glowing to show that the electrical system is not off.

You might want to take a look at your boat's electrical system to see what you can set up as a reminder to make sure the electrical system is actually off when you leave the boat. Oh yes, your bilge pump should be wired separately from the electrical system with its own switch/fuse connection so that it is "on" when everything else is "off."

The lead line to this article reflected the problem caused by the distraction of the operator who did not check that fuel was being loaded even though he signed the credit slip for the fuel. The fuel gauge system was one of the new multi-tasking electronic devices that showed the fuel status of the tank and also provided a switch that showed the fuel flow. He did not check the fuel level, after all he had paid for the fuel that had been loaded, and simply kept an eye on the fuel flow. After all, they had loaded 30 gallons of fuel and he could keep watch on the use. Well, the fuel had not been loaded and that tank went below the usable fuel level. He switched to the second tank, re-started the engine, and kept going. The discussion later at the fuel dock was another matter.





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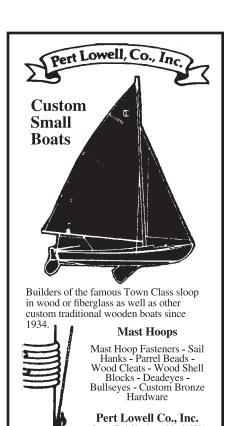
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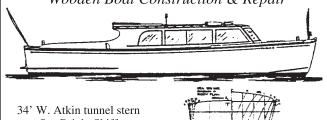
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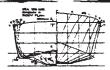
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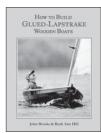
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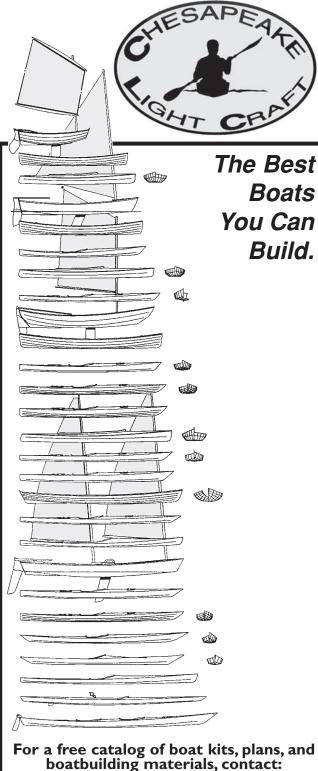
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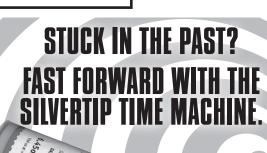
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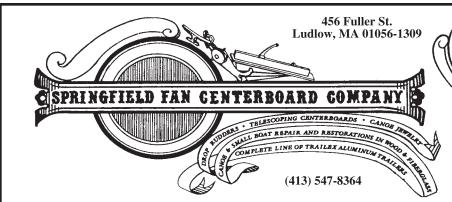
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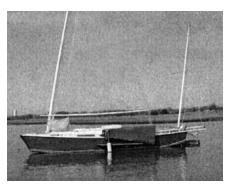
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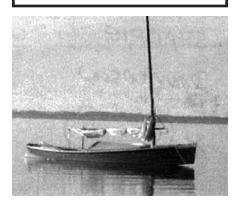
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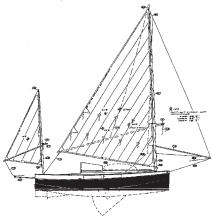


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ROBERT WHITTIER, 17 Lodgepole Ln., Kingston, MA 02364. (8)



Dory Plans, row, power & sail. 30 designs 8'-30'. Send \$3 for study packet. DOWN EAST DORIES, Dept. MB, Pleasant Beach Rd., S. Thomaston, ME 04858 (TF)



Egret 17' Skin-on-Frame Kayak, easy to build; many covering options. Plans, patterns, detailed instructions. \$55. SASA for more info. ROSS MILLER BOAT DESIGN, P.O. Box 256, West Mystic, CT 06388. (1209)

Wooden Boat Plans, unused. email for list w/prices.

RICHARD K LAUX, Shreveport, LA, RKLDUDE@yahoo.com (9)

BOAT PLANS & KITS - WWW. GLEN.COM:

Customer photos, FREE how-to information, online catalog. Or send \$9 FREE Supplies catalog. Over 240 proven designs, 7'-55'. "How To Use Epoxy" manual \$2.00.

GLEN-L, Box 1804MA, 9152 Rosecrans, Bell-flower, CA 90707-1804, (562) 630-6258, www. Glen-L.com (TFP)

**Robb White & Sons Sport Boat**, handy, pretty, proven 16' x 43" strip planked skiff. Will plane with 2 adults with 4hp. Full sized mold patterns, complete instructions. \$75. SASE for photos & SPOCS

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**Hankinson Designs**, Barrelbacks, Tugs, Cruisers & More. Available exclusively from Glen L Marine. Free online catalog at www.BoatDesigns.com (12)

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There are many pleasures in our business. Perhaps none is more keen than the friendships we've made: with our customers, with our potential customers, with our suppliers and those who put on the many shows we attend. But perhaps the keenest pleasures are the friendships made with the folks who work in our shop. Justin Martin is one of the hardest working, smartest, most up-energy and straight-shooting people we've ever known. This weekend Justin will be married to Erin Griffin. We'd wish them good luck....but we think they've already had all the luck they'll ever need. We send them our best wishes, of course.



#### **Upcoming Shows**

July 4-6 Berkshire Crafts Festival, Great Barrington, MA \*\*\*
July 12-13 Lake Champlain Maritime Festival, Vergennes, VT\*\*\*

July 18-20 Antique & Classic Boatshow, Hammondsport, NY\*\*\*

July 18-20 Lakeside Living Expo, Guilford NH \*\*\*

July 25-27 Finger Lakes Boat Show, Skaneateles, NY \*\*\*
Aug 1-3 Antique & Classic Boat Show, Clayton, NY \*\*\*

Aug 2-3 Champlain Valley Folk Festival, Kingsland Bay, VT \*\*\*

Aug 8-10 Maine Boats & Harbors, Rockland, ME \*\*\*

Sep 5-7 Port Townsend Boat Festival, Port Townsend, WA \*\*\*

Oct 9-13 United States Sailboat Show, Annapolis, MD

\*\*\* signifies on-water demos

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